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NAME OF AUTHOR/NOM DE L'AUTEUR Gregory Joseph Mireau

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NAME OF SUPERVISOR/NOM DU DIRECTEUR DE THÈSE Dr. P.A. Browne

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THE UNIVERSITY OF ALBERTA

AN INVESTIGATION OF GRADE TWO CHILDREN'S UNDERSTANDING OF SELECTED TERMS USED IN READING INSTRUCTION

by

GREGORY JOSEPH MIREAU

©

A THESIS

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FACULTY OF GRADUATE STUDIES

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled An Investigation of Grade Two Children's Understanding of Selected Terms Used In Reading Instruction, submitted by Gregory J. Mireau.

Patricia Brown
Supervisor

M. D. Jenkinson

Jay Bishop

Date April 18, 1978

ABSTRACT

Investigators have reported that many children in the very early stages of learning to read exhibited a type of "cognitive confusion" when asked to identify units and subdivisions in both oral and written forms, and appeared to have difficulty understanding the terms a letter, a word, and a sentence; vocabulary often used in reading instruction. They noted further that with many children this confusion lessened as they progressed in their reading program. However, a few children still appeared confused even at the end of grade one. Existing research has not, to the invesitgator's knowledge, explored if this confusion persists among some children in later grades. This study sought to further investigate grade two children's understanding of selected terms used in reading and their ability to identify written and spoken suffixes.

The sample consisted of 60 grade two children from the Edmonton Public School System. Thirty of these children, whose percentile rank on the paragraph meaning subtest, vocabulary subtest, word reading skills subtest, and the word study skills subtest of the Stanford Achievement Test was at or above 75 were defined as "good" readers. Thirty children whose percentile rank was at or below 25 on the same test were defined as "poor" readers.

To secure the above information each child was presented with five tasks: 1) to give an oral example of a word, a letter, and a sentence, 2) to identify written examples of these terms, 3) to answer a "use of" question pertaining to these terms, 4) to visually identify the suffixes (ed), (ing), and (s), 5) to auditorily identify the suffixes /t/, /ŋ/, and /s/.

The children's raw scores were computed and analyzed by the two-way analysis of variance statistical procedure amd post hoc comparisons were computed and analyzed by the one-way analysis of variance procedure. A descriptive analysis of responses to questions pertaining to the use of these terms was also presented.

The results indicated that no statistical significance existed between groups of "good" and "poor" readers when they were asked to give examples and identify the selected terms a letter, a word, and a sentence. Both groups scored well on both tasks. The good reader group scored significantly better on the tasks requiring the auditory identification of the suffixes /t/, /n/, and /s/. A descriptive analysis revealed that a few children from both reader groups showed varying degrees of confusion with all the tasks.

The results indicated that for the most part, grade two children have a good understanding of the selected

terms. Many poor readers had difficulty analyzing an oral word into its component parts, ie., root and suffix.

Several implications arising from the findings may be of pedagogical interest to classroom teachers regarding children at a grade two level. In addition, this study raised several questions and suggested areas of further investigation.

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CHAPTER I

INTRODUCTION

While it would seem obvious that children need to understand the language used in reading instruction, very little research has been done to ascertain just how well children do understand that language.

The limited research available only further clarifies the need for more extensive work in this area. For example, the studies of Reid (1966), Downing (1970,1974), and Francis (1973), which are reported later, suggest that most children, in the very early stages of learning to read, do lack knowledge of the instructional concepts commonly used in reading classes.

STATEMENT OF THE PROBLEM

The major problem investigated in this study was the determination of differences, if any, in children's understanding of instructional terms frequently used in reading, and their ability to identify written and spoken suffixes. Specifically, the problem was to determine if there were significant differences between the scored response of "good" versus "poor" second grade readers to tasks measuring their ability to identify and produce the instructional terms, a letter, a word, and a sentence, and their ability to identify the spoken suffixes /t/, /ŋ/,

/s/, and the written suffixes (ed), (ing), and (s).

DEFINITIONS

A number of terms which have meaning specific to this study are defined as follows:

1. Good Readers: refers to grade two children whose percentile rank on the paragraph meaning subtest, vocabulary subtest, word reading subtest, and word study skills subtest of the Stanford Achievement Test, administered by the classroom teacher in April-May, 1974 was at or above 75 using grade one school system norms.

2. Poor Readers: refers to grade two children whose percentile rank on the paragraph meaning subtest, vocabulary subtest, word reading subtest, and word study skills subtest, of the Stanford Achievement Test, administered by the classroom teacher in April-May, 1974, was at or below 25 using grade one school system norms.

3. Instructional Terms: refers to the terms a letter, a word, and a sentence.

4. Written Suffixes: refers to the past tense suffix (ed), the present progressive tense suffix (ing), and the plural suffix (s).

5. Oral Suffixes: refers to the past tense suffix /t/, the present progressive tense suffix /ŋ/, and the plural suffix /s/.

RESEARCH QUESTIONS

For the purpose of this investigation several research questions were formulated. Null hypotheses were developed in order to carry out the tests for statistical significance. The research questions and their corresponding null hypotheses were as follows:

Research Question I

Will there be a significant difference between groups of good and poor readers when they are asked to give examples of the instructional terms a letter, a word and a sentence?

Null Hypothesis I . There will be no significant difference between the good reader group mean scores and the poor reader group mean scores on the task measuring their ability to give examples of the instructional terms;

(a) letter
(b) word
(c) sentence.

Research Question II

Will there be a signifncant difference between groups of good and poor readers when they are asked to visually identify written examples of the instructional terms a letter, a word, and a sentence?

Null Hypothesis II. There will be no significant difference between the good reader group mean scores and the poor reader group mean scores on the task measuring their ability to identify written examples of the instructional terms;

(a) letter
(b) word
(c) sentence.

Research Question III

Will there be a significant difference between groups of good and poor readers when they are asked to give examples of the instructional terms, a letter, a word, and a sentence, as opposed to identifying written examples of the instructional terms, a letter, a word, and a sentence?

Null Hypothesis III. There will be no interaction between level of reader and mode of presentation.

Research Question IV

Will there be a significant difference between groups of good readers and poor readers when they are asked to auditorily identify the spoken suffixes /t/, /ŋ/, and /s/?

Null Hypothesis IV. There will be no significant difference between the good reader group mean scores and the poor reader group mean scores on the task measuring their ability to auditorily identify spoken suffixes.

Research Question V

Will there be a significant difference between groups of good readers and poor readers when they are asked to visually identify the written suffixes (ed), (ing), and (s)?

Null Hypothesis V. There will be no significant difference between the good reader group mean scores and the poor reader group mean scores on the task measuring their ability to visually identify written suffixes.

Research Question VI

Will there be a significant difference between groups of good and poor readers when they are asked to identify examples of spoken suffixes as opposed to identifying examples of the corresponding written suffixes?

Null Hypothesis VI. There will be no interaction between level of reader and mode of presentation.

LIMITATIONS

This study was subject to certain limitations arising from decisions made in the initial planning of the investigation. The following factors limit the interpretation of the findings.

1. The sample for this study was chosen from 12 grade two classrooms in the Edmonton Public School System, and therefore generalizability of the results is necessarily limited.

2. No auditory acuity test was administered to the children in this study and an auditory discrimination task was required of the children. This may confound the results of the auditory discrimination task.

ASSUMPTIONS

The null hypotheses tested in this investigation were based upon the following assumptions:

1. That the most recent paragraph meaning scores, vocabulary scores, word reading scores, and word study skills scores of the Stanford Achievement Test accurately defined subjects' present reading levels.

2. That all administrations and scorings of the Stanford Achievement Test followed the standardized procedures outlined with the test.

3. That the experimental setting and administration would not interfere with the subjects' responses to the tasks.

4. That the tasks administered were appropriate to investigate the problems in this study.

IMPORTANCE OF THE STUDY

Studies which have investigated children's understanding of language used in reading instruction suggest that most children, in the early stages of learning to read, do lack knowledge of instructional concepts commonly used in reading classes. Further, these investigators note, that as the children progress in their reading program, they gain a clearer understanding

of these terms. However, these investigators reported that this did not appear to be the case with all children. Some children, even in the later part of grade one, still exhibit confused ideas relating to these terms.

The present study proposes to extend our knowledge of children's understanding of instructional terms used in reading by examining both the issue of the grade two student's comprehension of instructional terms used in reading instruction and his ability to identify written and spoken suffixes.

Further, while statistical analysis has increased the credibility of reading research, in the final analysis the real test of our efforts is the degree to which our findings can bring about improvements in the teaching of reading. Thus, research based on the analysis of group scores, while valuable, needs to be complemented by in-depth studies of observed reading behavior of individual good and poor readers. These later data should help us focus more clearly on the need to treat each reader, especially those with problems. The present research also focused on the responses of individual children to a series of questions related to their understanding of the terms, a letter, a word, and a sentence.

OVERVIEW OF THE STUDY

Chapter I has dealt with the purpose of the study. It included a statement of the problem and sub-problems to be investigated; the definition of the terms used; the research questions and corresponding null hypotheses examined and tested; the limitations of the study; the assumptions underlying the study; and the importance of the present research.

Chapter II presents a review of the literature and research which gave direction to the present study.

Chapter III includes a description of the design of the study: the sample, the instrument used, the collection and treatment of the data, and the statistical procedures employed.

Chapter IV consists of an analysis of the data, a summary of the findings related to the research questions asked and the null hypotheses tested, and a descriptive analysis of responses to questions related to the children's understanding of the terms a letter, a word, and a sentence.

Chapter V includes a final summary of the study and conclusions arising from the findings. Implications and suggestions for further research are also given in this chapter.

CHAPTER II

REVIEW OF THE LITERATURE

This chapter will review the theoretical literature and the research relevant to this investigation of children's understanding of terms used in reading instruction.

The section on the theoretical background will focus mainly on two major concepts, "cognitive confusion" and "cognitive clarity", since both of these concepts have been considered in relation to the present problem by other researchers.

The section on research will explore those studies previously completed and which deal with problems of understanding specific to reading instruction.

THEORETICAL BACKGROUND

School children who are learning to read are forced to think about language. Investigations by Reid and others, to be reported later, have suggested that most young children in the very early stages of learning to read tend to lack a consciously analytic approach to speech. Specifically, the investigators reported that children in the early stages of learning to read had very little understanding of instructional

terms often used by the teacher during reading instruction. The investigators further reported that for the majority of the children, their understanding of instructional terms and other units in language appeared to develop from analysis of written forms as they learned to read. In each of the studies, however, the investigators noted that a small number of children did not develop the same degree of understanding. These children appeared to remain in a state of "confusion".

Cognitive Confusion

Vernon (1957) stated that children who continue to exhibit confused behaviors develop problems in reading. She argued that the one fundamental and basic characteristic of reading "disability" appeared to be what she termed "cognitive confusion". Vernon defined "cognitive confusion" as follows:

> The child with real reading disability... may indeed have learnt that printed words have some relation to spoken words; and, with a few simple words, he has memorized the spoken word that corresponds to a particular shape. But he does not seem to understand why; it might be quite an arbitrary association. He appears hopelessly uncertain and confused as to why certain successions of printed letters should correspond to certain phonetic sounds in words.
>
> (Vernon, 1957, p.68)

Although the above definition refers mainly to the child's inability to understand the relationship between letters and sounds, Vernon went on to suggest that the "retarded" reader was a student who remained in a state of confusion over the whole reading process.

If Vernon's definition of "cognitive confusion" accurately describes children who are experiencing difficulty in reading, then many of the poor readers in the present study would not have developed a consciously analytic approach to both spoken and written forms of language as they progressed through the reading program. The present study attempted to examine the degree to which grade two children have developed this ability by examining both the "good" and "poor" grade two reader's understanding of the selected terms a letter, a word, and a sentence and his ability to identify oral and written suffixes.

Cognitive Clarity

Downing (1970) expanded on Vernon's concept of children's cognitive confusion and proposed that from Vernon's description of "cognitive confusion" in the "retarded" reader, one might hypothesize that many normal readers would exhibit"'cognitive clarity' in this particular type of reasoning process...." involved

in learning to read (Vernon, 1957, p.68). A normal reader, therefore, should understand why printed words have some relation to spoken words. He should be certain why the sequence of printed letters corresponds to certain sounds. Downing further argued that a developmental process in beginning reading from an early stage of cognitive confusion to a later stage of cognitive clarity would occur with many readers and that this process should be observable.

If Downing's definition of "cognitive clarity" accurately describes children who are not experiencing difficulty in reading, then many of the good readers in the present study should have developed a consciously analytic approach to both spoken and written forms of language as they learned to read. The present study attempted to examine the degree to which grade two children have developed this ability by examining both the "good" and "poor" grade two reader's understanding of the selected reading terms a letter, a word, and a sentence, and their ability to identify oral and written suffixes.

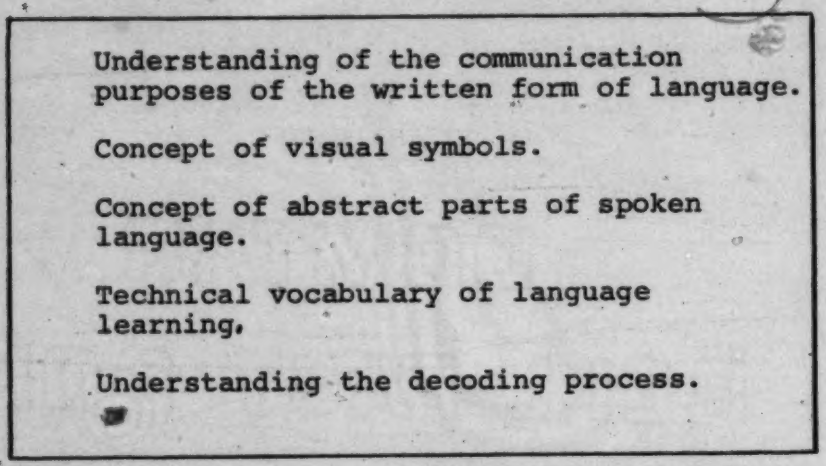
Dimensions of Cognitive Clarity

Downing (1970), on the basis of his investigations attempted to expand further both the concepts of "cognitive confusion" and "cognitive clarity". He

developed a model outlining five dimensions which lead to a state of "cognitive clarity". These dimensions are presented in Figure I below.

Figure I

DIMENSIONS OF COGNITIVE CLARITY


Understanding of the communication purposes of the written form of language.
Concept of visual symbols.
Concept of abstract parts of spoken language.
Technical vocabulary of language learning.
Understanding the decoding process.

(adapted from Downing, 1970, p. 117)

This investigation was concerned with two of the dimensions:

1. The child's understanding of the abstract parts of spoken language investigated by examining the "good" and "poor" reader's ability to recognize both spoken and written suffixes.

2. The child's understanding of the technical vocabulary of language learning, investigated by examining the "good" and "poor" reader's understanding of the selected terms a letter, a word, and a sentence; terms often used in the teaching of reading.

REVIEW OF RELATED RESEARCH LITERATURE

Concern for children's understanding of vocabulary has been noted in the area of Social Studies by DiVesta (1966), and in Arithmetic by Stauffer (1966), and others. However, these studies dealt with children's understanding of specific aspects of language including the use of connectives and word frequency count. Such studies while undoubtedly of interest, are not directly related to the subject of children's comprehension of language specific to instruction in reading.

Studies Concerned With Children's Understanding of Selected Terms Used in Reading Instruction

There has been very little research relating to the young child's concept of instructional terms used in reading instruction.

Although the studies reported here have been conducted independently, they have developed sequentially and are interrelated, in that the investigators in this area have attempted to build upon previous studies and have developed increasingly more sophisticated research designs.

Reid (1958) attempted to gain information about the usefulness of the structured interview as a means of

getting at children's notions of the nature of reading as formed during their first year of reading instruction. Her sample consisted of thirteen boys ranging in age from 5 yrs. 9 m. to 6 yrs. 5 m., selected from the first year of an Edinburgh boys school. The children had been at school for about eight months. They represented the "best reader", the "poorest reader", and two "intermediate " readers selected by the class mistress. Reid did not report on the number of classes which made up the sample.

The children were interviewed individually in school using the following questions:

1. Those designed to assess the child's general grasp of what his reading book was about.
2. Those about the child's impression of difficulty in reading.
3. Those about the nature of the difficulties.
4. Those about how the child dealt with the difficulties.
5. Those concerning the purpose of reading.

(Reid, 1958, p.297)

Reid reported that in the strategies for dealing with difficult words, seven boys answered "sound it out", "spell it", or "sound it". A request for examples of spelling showed that in every case the children were

actually attempting to "sound" but appeared confused between letter names and letter sound values.

While Reid (1958) did not deal directly with children's understanding of instructional terms used in the teaching of reading, one of her findings did reveal that beginning readers confused "letter sound" with "letter name", and the children in her study produced a mixture of these when "sounding" (or spelling) a word. Browne (1970) found that at least one teacher in her study used the term "spell" when she wanted children to "sound" words. Just how common this behavior is requires further study, but does suggest the need for precise use of terms in the instruction of reading.

Although Reid's sample of British school children was small and the study was not specifically designed to investigate children's understanding of technical terms used in reading or their understanding of suffixes in spoken or written language, it did serve to introduce these questions and gave direction to further investigations in this area.

Wilson(1973) also conducted an exploratory study in this area. She sought to ascertain thirty pre-school

children's ability to segment words, syllables, and phonemes and their understanding of the meaning of the terms "word" and speech "sound". The fifteen boys and fifteen girls with equal numbers representing the high, middle, and low ability level, and drawn from the low, middle low, and high middle socio-economic areas, were given the Segmentation Test, especially designed by the investigator for use in her study.

Wilson's findings are similar to those of Reid's. Wilson reported that the children were uncertain of the meaning of the terms "word" and speech "sound". With reference to "word", some children admitted to complete unfamiliarity, two children thought of a word as a letter, and the remainder gave no answer at all. When asked to suggest some words, some children were able to comply. The children were unable to say what a speech sound was, and could not give any illustrative examples.

A subsequent investigation by Reid (1966) gave further direction to the formulation of the questions explored in the present study. She extended her earlier study to include not only the notion about reading held

by a group of five year old children when they were learning to read and write, but also how these notions developed in the course of the first year at school. This time Reid conducted an interview with seven boys and five girls in an Edinburgh school. Each child was interviewed separately three times during the course of the year; after two months, five months, and nine months of school. The age of the children at the time of the first interview ranged from 5 yrs. 1m. to 5 yrs.5m. She used a core of standardized questions but their order varied as each individual conversation developed. The questions were worded in such a way as to allow children to use or not to use words such as "letter", "word", "sentence", etc. The responses from the interviews led to three main conclusions. In the first interview most of the children appeared to have difficulty understanding the purpose of written language, exhibiting only a vague idea of how people read. The children had special difficulty in understanding abstract terms such as calling letters "numbers" and words "names". This confusion became less apparent in the subsequent two interviews. Some children could be seen arriving at a stage of understanding that had been reached earlier by others, while the children who had shown more advanced

understanding previously progressed still further.

Reid's (1966) findings lent support to Downing's (1970) contention that a developmental process from an early stage of "cognitive confusion" to a later stage of "cognitive clarity" occurred with many children and this process was indeed observable. Growth along all five dimensions, as delineated by Downing, was observable with most of the children in the Reid study.

It was of particular interest to note from Reid's investigation that a few children exhibited a certain degree of "cognitive confusion" even in the last interview. Three of the children still confused "letter sound" with "letter name" and used the terms "spell", "sound", "copy" when referring to sounding words. These same three children also showed confusion when referring to letters and words. Two children used the term "word" when referring to "letters", eg."....like in 'must', 'm' is a word, 'u' is a word (p.59)".

In a replication and extension of Reid's (1966) interview, Downing (1971) also concluded that children in the early stage of learning to read showed confused notions of the purpose and process of reading and had difficulty in understanding abstract terms such as "word" and "sound". He also found that this confusion

became less as the children progressed in the reading program. However, as with Reid, Downing found that a few children still exhibited "cognitive confusion" in all five dimensions reported in Figure I, even in the last interview.

Metzer and Herse (1969) also showed interest in children's understanding of the term "word". They designed a study to determine the extent to which 39 children who had been in the first grade for two and a half months were able to discriminate the boundaries of written words. Specifically, the problem investigated was to determine how children define written words and what they consider to be its boundaries. A further problem investigated was whether children could distinguish between written numbers, letters, and words.

Of the 39 children the investigators noted that six equated words with letters, and twenty-six children made various combinations of errors ranging from dividing words "between tall letters" to "combined letters showing no regard for space". Only seven children accurately identified word boundaries without error.

The investigators suggested that there appeared to be a developmental process as the children gained some degree of understanding of word boundaries; and that this

process occurred in a hierarchical sequence as listed below:

1. Letters are words.
2. A word is a unit made up of more than one letter.
3. A space is used as a boundary unless the word is short in which case they are combined.
4. Only long words continue to be divided.

(Metzer and Herse, p.73).

Although the investigators did not report clearly on their sample, (ie., high, low, or average grade one students from one or more classrooms), they did report that the children had worked exclusively in a reading series which emphasized vocabulary and sentence control, rather than a series emphasizing spelling-to-sound correspondence, and that the data obtained from these 39 children may be peculiar to their particular experiences.

Not withstanding these obvious shortcomings, the study demonstrates the extent and types of confusion about word boundaries among young children and further extends Vernon's (1958) notion of "cognitive confusion" facing the reader in the very early stages of learning to read.

The study also lent further direction to the investigator of the present study by suggesting certain administrative procedures to be followed. These procedures are reported in detail in Chapter III.

Downing and Oliver (1974) also studied the child's understanding of "word". This investigation, however, was designed to study the child's conceptions of what constitutes spoken sound and words. Forty-two children, seven boys and seven girls, representing each of the following age ranges : 4.5 to 5.5 years, 5.6 to 6.5 years, and 6.6 to 8.0 years were tested. The children were from three different schools in the Victoria, B.C. area, were Caucasian, and predominantly middle class. Each child was asked to identify a spoken word from (1) examples of abstract non-verbal sounds, (eg. a knocking sound), (2) identifiable real life non-verbal sound, (eg. a dog barking), (3) isolated phonemes, (4) syllables, (5) phrases, (6) and sentences. A multivariate analysis of variance (3X2X8) showed that there were significant differences in the number of correct responses given to each class of auditory stimulus for all age groups. Downing and Oliver (1974) concluded that young children do not have an adequate concept of what constitutes a spoken word, and that they frequently confused phonemes, syllables, and short phrases with words. However, it appears that as children grow older, their concept of what constitutes a spoken word improves.

Downing and Oliver suggest that young children do not have an adequate concept of what constitutes a spoken word because of the abstract nature of the term. These observations are very similar to those of Vygotsky (1974) who reported on children's literacy in Russia. Vygotsky found that a tremendous lag existed between the school children's oral and written language and in his writings drew these conclusions.

> Our studies show that it is the abstract quality of written language that is the main stumbling block.
>
> (Vygotsky, 1974, p.99)

At some stage in learning to read, it is important for the child to appreciate that sound patterns of a word are divisible into smaller units, and that these units are common to the sound patterns of other words. Therefore, a further area of interest of the present study was to examine grade two children's ability to identify both written and oral suffixes. This skill requires among others, the ability to analyze words into component parts. Bruce (1964) attempted to gain information about children's ability to phonetically analyze spoken words. He attempted to ascertain the ability of sixty-seven children ranging in age from 5 yrs.1m. to 7 yrs. 6m. to make a simple phonetic analysis of the spoken word. Specifically, the children were asked to

analyze the word sound into two components: a letter sound and a sound unit which was the residual word obtained by elision of the letter sound from the test word.

The test administered consisted of thirty words; twenty-six monosyllables, three disyllables, and one trisyllable. The test was administered individually and the children were asked simply to say what word would be left if a particular letter sound were to be taken away from the test word. Ten test word elisions occured at the beginning, ten around the middle, and ten at the end of the word.

The results of this study once again suggested a developmental process from a stage of "cognitive confusion" to a degree of "cognitive clarity" in children's ability to analyze phonetically the spoken word, taking age as a factor. Bruce reported that there was a gradual progression toward accurate analysis in the course of which children:

1. come to recognize that words and sound are interrelated.
2. acquire criteria of what constitutes analysis.
3. achieve positional differentiation.
4. overcome the cohesiveness of the word sound pattern in their experience.

(Bruce, 1964, p.158)

This study by Bruce, (1964), as reported, appears to be of sound design and administration and the results and conclusions should be noted with some confidence. Although the phonetic analysis conducted by Bruce differed from that of the present study, the process of analysis is similar and should be generalizable. With this in mind, the present study sought to examine children's ability to analyze words by asking them to identify spoken suffixes. This analysis was then compared to the children's ability to visually identify the corresponding written suffixes.

Francis (1973) conducted a study designed to "trace children's comprehension of instructional terms and their abilities to identify units in written and spoken language while they learn to read (p. 17)". All the children admitted to a Leeds primary school (5.9 - 7.3) were tested at school entry, then three subsequent times at six month intervals. The sample was deliberately chosen to represent children of good social background and with more than average ability. The following tests were individually administered in two 20 minutes sessions.

1. Reading progress measured by the Schonell Graded Word Reading Test.

2. Understanding of concepts letter, word, and sentence, explored by asking for examples, recognition and ideas about use.

> 3. Ability to identify suffixes by sound and by sight, explored by seeking the reasoned choice of two similar words from a set of three, where one item did not carry a suffix.
>
> 4. General understandings of concepts by a vocabulary test. (Francis, I973, p.I9)

She reported that children in the beginning stages of learning to read had vague and confused understandings of the terms a letter, a word, and a sentence. It was further noted that the children had more difficulty with the task of giving an example of each of these terms than identifying written examples of the terms. As with Reid (1966) and Downing and Oliver (1974), Francis noted the confusion became less as the children progressed in the reading program, suggesting as before, a developmental process which appeared to go from a state of "cognitive confusion" to some degree of "cognitive clarity". It was further noted, however, that once again some children, even in the last testing period, (eighteen months from the start of primary), still exhibited "cognitive confusion" in both identifying and producing examples of the terms a letter, a word, and a sentence.

The test of auditory and visual identification of suffixes yielded different results; with auditory identification of suffixes proving to be the more

difficult task on all four test occasions. However, an improvement with both tasks was apparent on each subsequent test occasion suggesting that the children did develop analysis skills as they progressed in their reading program. These findings are consistent with those of Bruce (1964).

Francis concurred with Reid, Downing, and Vygotsky that the abstract quality of the terms a letter, a word, and a sentence may present difficulties in understanding, but she suggested that the children's difficulties with these terms may also be because of the overlap in their application and that they are somewhat ill-defined. Further, children have never had to analyze speech, but in learning to read are forced to recognize units and subdivisions. Young children in the very early stages of learning to read may lack a consciously analytic approach to speech and their notions of units in language appear to be derived from analysis of written form as they learn to read.

The present study attempted to examine further both Downing and Vygotsky's idea of the abstract quality of selected language terms, and Francis'notion that many children develop a consciously analytic awareness of language as they progress through the reading program. The present study attempted to do this by extending

selected aspects of the Francis investigation to a population of grade two children, In the present study, tasks (2) and(3) used by Francis in her investigation, were administered to two groups of grade two children identified as "good" and "poor" readers. A complete explanation of the tasks used in the present study is presented in Chapter III.

SUMMARY

The intent of this survey of research studies was to present a theoretical framework for the study, and to show the extent of the investigations and to glean insights from the findings.

In all of the studies reviewed, the investigators reported that many young children in the very early stages of learning to read exhibited a type of "cognitive confusion" when asked to identify units and subdivisions in both oral and written forms. Further, the children appeared to have difficulty understanding the terms sound, letter, word, and sentence.

This confusions appeared to lessen with many children as they progressed through the reading program. However, for some children, even in the later stages of grade one, this confusion still seemed to exist. These children

closely resembled the young children in the very early stages of learning to read.

It was of interest to the investigator of the present study to ascertain if grade two children also exhibited some degree of "cognitive confusion" when asked to identify both written and oral suffixes, and to determine their level of understanding of the selected terms a letter, a word, and a sentence.

The development of an instrument and the administrative procedures to accomplish this task are reported in the next chapter.

CHAPTER III

THE DESIGN OF THE STUDY

This chapter will describe the sample, the testing instrument used in the study, the statistical treatment of the data, and the descriptive analysis of the data.

SELECTION OF THE SAMPLE

The population of this study included all the second grade students in the Edmonton Public School System. The selection of the second grade as the most suitable testing level for the purposes of this study was based on several reasons. First, previous studies had indicated that the pre-reader lacks knowledge of the instructional concepts commonly used in reading classes. It seemed logical to assume that "poor" readers at other grade levels might resemble these pre-readers. Moreover, no study of this nature at these higher grade levels exists to the writer's knowledge.

To confirm these observations, the Pilot Study, to be described later, examined the third grade students' understanding of the instructional terms used in the main study and their ability to identify specific units in written and spoken language. Preliminary results indicated that the "poor" readers at the third grade level showed a fairly good understanding of these concepts. On this basis

it was decided that subjects from the second grade level would better reveal differences in the extent to which learners might lack knowledge in this area.

The initial sample included 309 students in twelve different grade two classrooms from seven elementary schools in the Edmonton Public School System. These schools had been identified by personnel in the school system as available to the investigator for the purposes of this study. The investigator was granted permission to examine the cumulative record cards of all the students in these classes in order to identify a final sample of good readers and poor readers according to performance on the paragraph meaning subtest, the vocabulary subtest, the word reading subtest, and the word study skills subtest of the Stanford Achievement Test, Primary I Battery.

Use of the Stanford Achievement Test (S.A.T.) to Identify the Sample of Good and Poor Readers.

The S.A.T. had been administered by first grade teachers in the spring of 1974 as part of a system-wide administration policy. Teachers computed the test and subtest raw scores which were normed by computer analysis using normative data from the Edmonton system. Since these test results were the ones most readily available at the time this study was initiated, they were used as the basic data for the selection of the final sample of "good" and

"poor" students. Specifically the profile sheets for all students were examined until thirty good readers, those who scored at or above the 75th percentile on each of the four subtests were identified, and thirty poor readers, those who scored at or below the 25th percentile on each of the four subtests were further identified.

The S.A.T. is well documented by Buros (1972), and others, therefore a detailed description is included in Appendix A.

DEVELOPMENT AND DESCRIPTION OF THE INSTRUMENT

While the instrument used in this study was based on selected aspects of the instrument developed by Francis (1973) in her investigation of British pre-school children's understanding of selected instructional terms, the instrument had to be adapted to accommodate the difference in age and cultural background of the children in this study.

In this section the two tasks in the Francis instrument basic to the instrument devised for this study are described. Subsequently the adaptations and additions which lead to the four tasks comprising the final instrument used in this study are described.

Selected Sections of the Francis Instrument Relevant to the Present Study.

Francis (1973, p. 19) explored the children's understanding of the concepts a "letter", a "word", and a "sentence"; (a) by asking for examples of these terms, (b) by asking the children to identify written examples of these terms and (c) by asking questions about the use of these terms.

Specifically, when Francis asked for examples and use of the term "letter", these questions were asked. "Can you tell me a letter - any letter you know?" "What do we use letters for?" These questions were repeated for the terms a "word" and a "sentence". If the children had any notion of a sentence they were asked how they knew when they came to the end of a sentence when they were reading or speaking.

Francis reported that she also asked children to identify written examples of the terms a "letter", a "word", and a "sentence" by showing them a "card with two examples of each term randomly arranged and each in a well-defined outlined space." (p.21). The children were then asked to identify one example of each. She further reported that the instructions made clear that an example all by itself inside a space was required and if a child pointed to incorrect examples he was asked if he meant all of the items

within the boundary line, this being indicated by a movement of the finger over the whole item.

Francis explored the children's ability to identify suffixes by sight and sound; (a) by asking the children to auditorily identify the suffixes /t/, /d/, and /s/, and (b) by asking the children to visually identify the written suffixes (ed), (ing), and (s). Specifically, Francis explored the children's ability to auditorily identify suffixes by asking them to listen carefully to each set of three words, two of which carried a marker but one of which did not, and then choose the two which sounded the same in some way. After their choice they were asked for an explanation. The plural and the past and present progressive tense markers were used as in cats, mops, girl; ran, jumped, walked; and sticking, glue, pasting (p.21).

Francis explored the children's ability to visually identify these same suffixes by presenting the same sets of words written clearly on cards and asking them to choose the two which looked the same in some way and explain their choice. The auditory part of the task was presented first to avoid facilitation from the visual mode via phonic training when the children were able to read the words (p.21).

Description of the Tasks Comprising the Instrument Used in This Study

The adapted instrument consisted of four tasks.

Task 1 asked for examples and ideas about the use of a letter, a word, and a sentence. This was accomplished by asking the children the same questions used in the Francis study, ie., "Can you tell me a letter - any letter you know?" "What do we use letters for?" These questions were repeated for the terms a "word', and a "sentence". If the children had any notion of a sentence they were asked how they knew when they came to the end of a sentence (1) when they were reading and (2) when they were listening.

Task 2 asked the children to recognize a letter, a word, and a sentence. The same procedure as that in the Francis study was used except that the specific letters, words, and sentences were drawn from a Canadian reading series. Specifically, the children had before them a card with two examples each of a letter, a word, and a sentence randomly arranged and each in a well-defined space as in Figure 2.

Figure 2

EXAMPLES OF LETTERS, WORDS, AND SENTENCES

1	M
2	birthday
3	o
4	He got a pencil from his pocket and began to make a list.
5	bicycle
6	It was a fine time to be hiking.

The children were then asked to identify one example of a letter, a word, and a sentence given the following instructions:

> Is there any box that has a word in it? Point to the box. Now take your pencil and underline the whole word.
>
> Is there any box that has a letter in it? Point to the box. Now take your pencil and circle the letter.

The present study asked the children to circle their example of a letter, and underline their example of the whole word and the whole sentence so a permanent record of their responses would be obtained.

Task 3 required the auditory identification of the suffixes /t/, /s/, and /ŋ/. As in the Francis study, the children were asked to listen carefully to a set of three words randomly arranged and to choose the two words which sound the same in some way. After their choice they were asked for an explanation of how their two choices sounded the same. The present study also used the plural and past and present progressive tense markers, however, words from a first grade reader in a Canadian reading series were chosen as root words as in jumped, splash, marked; train, riding, smoking; and horses, tumblers, and lion.

> I am going to say three words. I want you to listen to the three words and tell me two that sound the same in some way. Then I want you to tell me how they sound the same. Listen 'jumped, splash, marked'. How do they sound the same in some way?

Task 4 required the visual identification of the suffixes (ed), (ing), and (s). As in the Francis study, the same set of words described in Task 3 and arranged in the same order were presented, typed clearly on cards as in Figure 3.

Figure 3

EXAMPLES OF WRITTEN SUFFIXES

1	jumped	splash	marked
2	train	riding	smoking
3	horses	tumblers	lion

The children were then asked to choose the two words which looked the same in some way and circle the parts of the words that looked the same.

> Look at this page. There are three boxes on the page, Box 1, Box 2, and Box 3. Lets look at each box separately. (The other two boxes were then masked.) I want you to look carefully at the three words in this box. (The instructor pointed out each of the three words.) I want you to point to the two words that look the same in some way. Now circle the parts of the words that look the same.

A copy of the complete instrument in its required format is included in Appendix B.

THE PILOT STUDY

When the main study was first conceived, the original decision was to use a sample of good and poor readers at the third grade level. However the results of a small pilot study involving the administration of the instrument to a sample of five poor readers at the third grade level showed that with the exception of one, all the students responded in a satisfactory manner to Tasks 1 and 2. Tasks 3 and 4 proved to be more demanding; three students responded in a satisfactory manner, two students were unable to. Therefore it was decided to select children from the second grade for the main study. This decision was based on the premise that all the tasks would prove more demanding for the second grade students.

The pilot study further revealed that test directions were clearly understood and did not require further revisions. During the course of the pilot study, ideas for collecting the data were also generated and became the basis for the present data collection procedures outlined in the next section.

DATA COLLECTION PROCEDURES

The Interview Schedule

Of the four tasks administered, two tasks consisted of production activities and two tasks consisted of

recognition activities. The production tasks preceded the recognition tasks in each instance. This was to insure that the children had been given no clues to assist them with the subsequent tasks. Also they were not told whether their examples or choices were accurate or not. This was done to further insure that no training for the subsequent tasks took place.

The Interview Settings

The interviewer was able to procure a quiet area, free from most distractions and interruptions (with the exception of call bells), in all of the seven schools for the purpose of conducting interviews with each individual child. These areas included medical rooms, small self-contained study areas and empty classrooms.

Establishing Rapport With Pupils

Contact was established with each child in his or her classroom. While escorting the child to the interview room, the interviewer conducted an informal conversation attempting to establish a warm and positive relationship. Each child seemed to respond in a positive manner and appeared to develop an interest in the expected task. Even the most timid child seemed to respond with some excitement.

Administration of the Tasks

The investigator administered the adapted instrument to sixty children. The tasks were administered in the same

order to each child. The interview began with an introductory comment giving the purpose of each task. Eg: "I want you to help me find out how well you know what a letter, a word, and a sentence is and I am going to ask you some questions about them." A statement was then given to begin the students' responses. This was restated if requested ie., "Can you tell me a word, any word that you know?" An additional statement was then offered for the reluctant respondents, ie., "Do you know any words? Can you tell me one of these words?" A final question was then asked to elicit additional responses, ie., "What do we use words for? Is there anything else you can tell me about words?"

The data gathering period began in the early part of May, 1975, and continued for eight days. The length of time required for an individual ranged from ten minutes to twenty-five minutes. Some children responded more quickly than others and were able to complete all tasks within ten minutes. Some children required up to twenty-five minutes to complete the tasks. When the interview time became long, it was discontinued for a short period of relaxation after Task Two and then resumed.

Recording Children's Responses

All responses were recorded on Sony Low-Noise Auto Sensor tape through the use of a Sony TC110A cassette tape

recorder. The responses were transcribed by the investigator and are reported in full in Appendix C, D, E, and F.

Preparation of the Data for Analysis

Each child in the study was given an identification number and labelled according to group membership, ie., good reader or poor reader.

The child was given one point for a correct response to each task and no points for an incorrect response to each task. Eg. If a child was able to supply a word when asked, "Can you tell me a word, any word that you know?", the child received one point for his response. If the child was unable to supply a word when asked to supply a word or if the child gave an incorrect response, then no points were given.

These data were punched onto an I.B.M.card for each child in order to facilitate statistical analysis. Data included on each child's I.B.M.card included: an identification number, a group membership number (good reader or poor reader), and the score obtained for each task ('1' for a correct response, '0' for an incorrect response). The children's scores were totalled for each group according to task and transferred to summary sheets which are reported in Appendix C, D, E, and F.

STATISTICAL ANALYSIS OF THE DATA

Analyses of variance (Computer Programs ANOV 23 and ANOV 12) were two of the basic statistical tests used in this study. An F value significance at the .05 level was established as the level at which the corresponding null hypothesis could be rejected.

An analysis of variance (Computer program ANOV 10) was the statistical test used as a post hoc comparison procedure in this study. An F value significance at the .05 level was established as the level at which comparisons were accepted as significant.

The following statistical analyses were made of the data:

(1) The group means (good reader and poor reader group) for responses to Tasks 3* and 4* were tested for significance. Post hoc comparisons were then conducted.

(2) the significance of the interaction (between level of reader and treatment given) for Task 3 and 4 was conducted.

There was no variance between reader groups to responses for Task 1* and very little variance between

---

*Task 1 Production of the terms a letter, a word, a sentence
*Task 2 Recognition of the terms a letter, a word, a sentence.
*Task 3 Auditory identification of suffixes
*Task 4 Visual identification of suffixes.

readers groups to responses for Task 2*. An analysis of variance was not possible for Task 1 and deemed unnecessary for Task 2.

DESCRIPTIVE ANALYSIS OF THE DATA

A descriptive analysis of the responses of individual children to a series of questions relating to the child's understanding of the instructional terms a letter, a word, and a sentence was also conducted. This analysis is reported in detail in Chapter IV.

SUMMARY

This chapter has presented a description of the sample, the instrument, the Pilot Study, and the data collection procedures. The treatment of the data and an outline of both the statistical and descriptive treatment of responses concluded the chapter.

CHAPTER IV

FINDINGS OF THE STUDY

The purpose of this chapter is to present and discuss the findings of the present study. Section one reports and discusses the statistical results specific to the research questions which guided the study. Section two deals with a descriptive analysis of the responses of individual children relating to their understanding of some basic concepts used in many classrooms as part of the instructional vocabulary of the teacher.

RESULTS OF THE ANALYSIS OF THE RESEARCH QUESTIONS

Research Question I

Will there be a significant difference between groups of good and poor readers when they are asked to give examples of the instructional terms a letter, a word, and a sentence?

Null Hypothesis I. There will be no significant difference between the good reader group mean scores and the poor reader group mean scores on the task measuring their ability to give examples of the instructional terms;

(a) letter
(b) word
(c) sentence.

Table 1 shows the raw scores for the good reader group and the poor reader group in the task measuring their

ability to give examples of (a) letters, (b) words, and (c) sentences.

Table 1

TOTAL GROUP RAW SCORES BASED ON THE PRODUCTION OF EXAMPLES OF LETTERS, WORDS, SENTENCES.

Production Task	Good Reader N=30		Poor Reader N=30	
	Correct	Incorrect	Correct	Incorrect
Letter	27	3	22	8
Word	29	1	28	2
Sentence	30	0	30	0

Discussion

Table 1 reveals that twenty-seven good readers and twenty-two poor readers produced acceptable examples of letters when asked to. A preliminary analysis of variance (from Ferguson, 1971,p.161), revealed a Z value of .527. This value did not reach a degree of significance of .05.

Both reader groups did better when asked to give examples of a word. Twenty-nine good readers and twenty-eight poor readers were able to give an acceptable example of a word.

Both good readers and poor readers scored perfectly in producing examples of sentences.

Null Hypothesis I was not rejected.

Research Question II

Will there be a significant difference between groups of good and poor readers when they are asked to visually identify written examples of the instructional terms a letter, a word, and a sentence?

Null Hypothesis II. There will be no significant difference between the good reader group mean scores and the poor reader group mean scores on the task measuring their ability to identify written examples of the instructional terms;
(a) letter
(b) word
(c) sentence.

Table 2 shows the raw scores for the good reader group and the poor reader group in the task measuring their ability to identify examples of (a) letters, (b) words, (c) sentences.

Table 2

TOTAL GROUP RAW SCORES BASED ON THE IDENTIFICATION OF EXAMPLES OF LETTERS, WORDS, SENTENCES.

Identification Task	Good Reader N=30		Poor Reader N=30	
	Correct	Incorrect	Correct	Incorrect
Letter	30	0	30	0
Word	30	0	30	0
Sentence	30	0	30	0

Discussion

It is obvious from Table 2 that both the good readers and the poor readers scored perfectly in identifying the

terms; (a) letter, (b) word, (c) sentence. Null Hypothesis II was not rejected.

Research Question III

Will there be a significant difference between groups of good and poor readers when they are asked to give examples of the instructional terms, a letter, a word, and a sentence, as measured by task one, as opposed to identifying written examples of the instructional terms, a letter, a word, and a sentence, as measured by task two?

Null Hypothesis III. There will be no interaction between level of reader and mode of presentation.

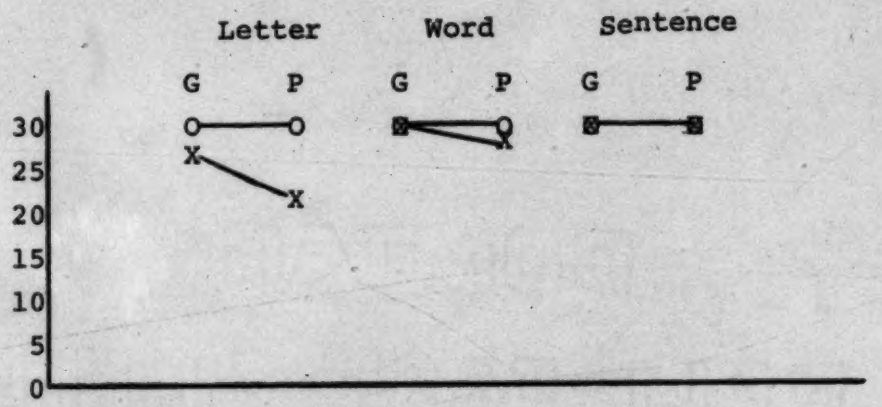
Discussion

It was not possible to conduct an analysis of variance for these data because of the lack of variance between the scores of the good reader group and the poor reader group to the task of identifying the instructional terms a letter, a word, and a sentence, and for the small amount of variance between the scores of the good reader group and the poor reader group to the task of giving oral examples of the instructional terms, a letter, a word, and a sentence. The good and the poor readers did significantly as well with the recognition task as with the production task. These data are graphically presented in Figure 4.

Null Hypothesis III was not rejected.

Figure 4

INTERACTION OF SCORED RESPONSES TO A RECOGNITION TASK VERSUS A PRODUCTION TASK OF TERMS, A LETTER, A WORD, A SENTENCE.



X-Production Task
O-Recognition Task
G-Good reader
P-Poor reader

Research Question IV

Will there be a significant difference between groups of good readers and poor readers when they are asked to auditorily identify the spoken suffixes /t/, /ŋ/, and /s/?

Null Hypothesis IV. There will be no significant difference between the good reader group mean scores and the poor reader group mean scores on the task measuring their ability to auditorily identify spoken suffixes.

An analysis of variance (ANOV23) produced the information summarized in Tables 3 and 4 and Figure 5.

Table 3 presents the group means for the auditory identification of the spoken suffixes /t/, /ŋ/, and /s/.

Table 3

GROUP MEANS BASED ON SCORED RESPONSES TO AUDITORY IDENTIFICATION OF SUFFIXES

	Possible Scores	/t/	/ŋ/	/s/
POOR READERS (N=30)	1	.566	.566	.533
GOOD READERS (N=30)	1	.933	.966	.966

Table 4

SUMMARY OF THE ANALYSIS OF VARIANCE FOR TOTAL SCORES ON THE AUDITORY IDENTIFICATION OF THE THREE SUFFIXES AND THE LEVEL OF READER.

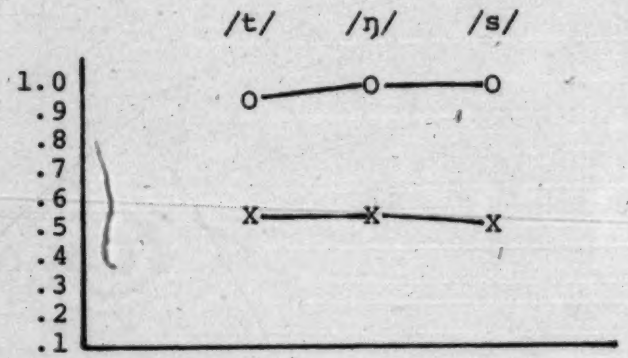
Source of Variation	SS	DF	MS	F
Between Reader Groups	7.200	1	7.200	24.031**
Interaction	.033	2	.017	.224

** Significant beyond the .01 level

Figure 5 illustrates graphically the group means for the auditory identification of the spoken suffixes /t/, /ŋ/, and /s/.

Figure 5

GROUP MEANS BASED ON SCORED RESPONSES TO ADUITORY IDENTIFICATION OF SUFFIXES



X- POOR READERS
O- GOOD READERS

Table 4 presents the summary of analysis of variance for the total scores on the auditory identification of suffixes and level of reader.

Discussion

Table 4 reveals that the F value for level of reader for total scores on the auditory identification of the three suffixes was 24.03. This value reached a degree of significance beyond the .01 level. Null Hypothesis IV was rejected.

The F value for interaction between the level of

reader and the types of language units was .224 revealing no interaction.

This information is graphically illustrated in Figure 5 which shows that the good reader group scored equally as well on the auditory identification of each of the three suffixes /t/, /ŋ/, and /s/ respectively. This was also the case with the poor reader group.

A post hoc comparison was also conducted to determine the level of significance between reader groups for the mean scores of each spoken suffix /t/, /ŋ/, and /s/. The T scores reported in Table 5 were calculated by using an (ANOV10) procedure.

Table 5

DIFFERENCES BETWEEN MEANS OF THE GOOD READER GROUP AND THE POOR READER GROUP FOR EACH AUDITORY SUFFIX

Suffixes	T Value
/t/	-3.559**
/ŋ/	-4.087**
/s/	-4.401**

** Significant beyond the .01 level on a 2-Tail Test

Table 5 reveals that there is a significant difference between the scores of the good reader group and the poor reader group for each of the auditory suffixes /t/, /ŋ/, and

/s/. This difference reached beyond the .01 level of significance.

Research Question V

Will there be a significant difference between groups of good readers and poor readers when they are asked to visually identify the written suffixes (ed), (ing), and (s)?

> Null Hypothesis V. There will be no significant difference between the good reader group mean scores and the poor reader group mean scores on the task measuring their ability to visually identify written suffixes.

Upon closer examination of the nature of the task designed to measure the children's abilities to visually identify the suffixes "ing" and "s", it was found that the identification of any of the two words from the three listed represented a correct response to the directives given for completing the task. Specifically, the children were asked to examine the three words train, riding, and smoking and "to point to the two words that looked the same in some way". The children were then asked to "circle the parts of the words that looked the same". While the examiner accepted the circling of the "ing" in the words riding and smoking as the correct responses, it was pointed out to him later that an equally correct response, given the specific nature of the directive, was the circling of the "in" in any of the three words,

including train. Similarly, Task Two had a similar flaw in that the three words selected for "s" were horses, tumblers, and lion. Subjects could, therefore, given the nature of the directive, be equally correct in circling the "rs" or the "s" or "e" in horses and tumblers. Similarly, the subjects could choose the "o" in horses and lion, or the "l" in tumblers and lion. Because of these problems it was conceded that Hypotheses V and VI could not be tested as planned. However, in analyzing the results of the responses of the "good" and "poor" readers to the tasks as directed, some interesting differences in the responses of the two groups emerged. The results are reported and discussed more fully below. It may interest the reader to know, however, that among the responses recorded for both reader groups, there was a greater tendency for the "poor" readers to circle the letters in the "distraction word". Some interesting questions about this phenomenon are also explored below.

Item Analysis of Possible Responses to the Task of Visually Identifying Suffixes.

An item analysis indicating the possible choices which children could use when asked to choose two words that look the same in some way is presented below:

train, riding, and smoking

1. riding and smoking
2. train and riding (or smoking)
3. train and riding
4. train and riding (or smoking)

Four possible choices exist when the children are asked to visually analyze the three words train, riding, and smoking. These four choices are indicated above.

horses, tumblers amd lion

1. horses and tumblers
2. horses and tumblers
3. horses and tumblers
4. horses and lion
5. tumblers and lion

Six possible choices exist when the children are asked to visually analyze the three words horses, tumblers, and lion as indicated above.

A recap of the responses of the "good" and "poor" reader groups to the task of visually analyzing the similarities between these words is presented in Table 6 below.

Table 6

RESPONSES TO THE TASK ASKING CHILDREN TO VISUALLY ANALYZE SIMILARITIES IN WORDS

	GOOD READERS	POOR READERS
riding smoking	29	26
train riding	0	2
train riding	1	0
others		
train riding	0	1
train riding	0	1
Total	30	30
horses tumblers	27	17
horses tumblers	1	5
horses tumblers	1	0
horses lion	0	2
others		
horses tumblers.	1	0
horses tumblers	0	1
don't know	0	1
horses don't know	0	1
horses tumblers	0	1
horses tumblers	0	1
horses tumblers	0	1
Total	30	30

Discussion

Table 6 indicates that most children in both reader groups chose the suffix "ing". When asked to circle how "two words look alike in some way", one child in the "good"

reader group and two children in the "poor" reader group chose alternate correct responses. Two children in the "poor" reader group responded incorrectly.

Most children in the "good" reader group and more than half of the children in the "poor" reader group chose the suffix "s" when asked to indicate how "two words look alike in some way". The remainder of the "good" readers and eight "poor" readers chose alternate correct responses. Five "poor" readers chose incorrect responses.

It could be argued that the children who chose the alternate correct responses such as the "rs" in horses and tumblers or "in" in train, riding, or smoking rather than the "s" or the "ing" analyzed these words more closely. To identify the "rs" on the "in" requires that the child focus on the medial part of the words rather than the beginning or end. If such is the case these children would be functioning at a higher level, in terms of visual analyses of words, than the children who chose the suffixes which are located at the end of the words.

However, it could also be argued that the children who chose the suffixes did so in terms of both visual similarity and function. These children possibly chose these suffixes not only because they were visually similar but also because they represented a meaning unit. In this case, these children would be using suffixes both as word recognition and a comprehension skill.

DESCRIPTIVE ANALYSIS OF THE RESPONSES OF INDIVIDUAL CHILDREN RELATING TO THEIR UNDERSTANDING OF TECHNICAL TERMS USED IN THE TEACHING OF READING

While statistical analysis of group behavior in reading tests contribute significantly to furthering our understanding of the reading process, many of the problems which must be dealt with by the reading teacher or the reading specialist are of an individual nature. Thus while the statistical analysis reported in section one does not indicate the failure of second grade children to understand instructional concepts in a generalized problem, the fact remains that some second grade children have difficulty dealing with these concepts. In order to highlight the need to attend to problems which may affect the performance of a limited number of children, but which by their nature are therefore pedagogically, if not statistically significant, this section will explore the results of this study using a descriptive analysis. The following section focuses on group and individual responses to the child's understanding of the terms a letter, a word, and a sentence.

A Letter

Of the children who had difficulty producing a letter, one child from the good reader group focused exclusively

on the "letter you send" and although the examiner asked in a number of ways for a different kind of a letter by the use of probing questions, the child continued to give examples of 'letters you send'. This was also the case with two children in the poor reader group.

Two of the children in the good reader group produced a phoneme when asked for a letter. One child in the poor reader group also responded in a similar manner. Four children in the poor reader group were unable to give an example of a letter: responding with answers such as "I can't think of one" or "no". One child, even after probing questions, gave no answer at all. One child from the poor reader group gave the word "how" when asked for an example of a letter.

What Do You Use Letters For?

The majority of children in the good reader group gave a variety of answers to the questions "What do you use letters for?" which pertained to the creation of words, ie., "to make words", "names and words", "words", "spelling", "spelling words", "printing and writing and making words".

When asked "How do you use letters for....?"(ie., "making words", or "names and words", etc., depending on

their answer to the above question) most of the "good" readers responded with answers suggesting that the letters went together in a sequence to make words. eg., "well we put letters in a special way to make words somehow", or "like in 'can' , its /k/-(æ)-/n/, that's a word".

The two children in the good reader group who gave a "letter you send" response when asked to give an example of a letter, continued to focus on this answer and when asked "What do we use letters for?" could not give an answer.

Two children in the good reader group appeared somewhat confused with the use of letters: one child suggested that you "put them in sentences" and the other gave no response.

Twenty-four children out of the possible thirty in the low reader group also gave a variety of answers to the question "What do you use letters for?", which pertained to the creation of words ie., "to write with", "like writing your name", "to spell words", "to make words with", etc.

When these children were asked "How do you use letters for ....? (ie., "to write with", or "to make words with", etc., depending on their answers to the above question),

only eight were able to answer to the effect that certain letters in a sequence made up words. The remainder gave vague and confused answers, ie., "by making (t) for toy", or "make you smart". Six of these children simply answered " I don't know". The one child who gave "a letter you send" as an answer to the request for a letter answered "I don't know" to the question about use. The other child who gave " a letter to my aunt" as a response to the request for a "letter" stated that "letters were used to write words". When asked for their use she answered "you write them down on a piece of paper".

Two children in the low reader group responded that letters were "to read", or "to write", when asked about the use of letters. When asked how this was done, ie., "How do you use letters to read?", both children replied " I don't know". Another child from this group suggested that letters were used "to make sentences", and when asked how this was accomplished answered "I don't know".

A Word

One child in both the good and poor reader group gave an example of a proper noun when asked for a word. When another word was requested, the child in the good reader group responded with a word other than a name.

However, the child in the poor reader group once again supplied a proper noun as an example of a word.

One child in the poor reader group gave an example of letter L when asked for a word.

What Do You Use Words For?

All of the thirty children in the good reader group responded to the "use of words" question by stating that words were used in some form of sentence either written or spoken, to convey a message, ie., "make sentences", "to talk", "printing", "to read", "telling things", "to say the meaning of things". The majority of these children elaborated further by stating that this was accomplished by putting words in a certain order to make sense, ie., .."the words put together have to make sense or the sentence won't make any sense and you won't be able to understand it", or "you put them in the right order".

A few of these children were not quite sure how this was accomplished. When asked how words were used "to read" the responses ranged from "I don't know" from one child and "well with letters" from another child. When asked how words were used in a sentence another child replied, "by using the alphabet".

Seventeen of the children in the poor reader group responded to the "use of words" question by stating that words were used in some form of sentence either written or spoken to convey a message, ie., "to make sentences", "to say things...","to talk to people", etc.

Of these children only seven were able to elaborate their answers as to how words were used in the way they mentioned. The other seven children answered with "eh-that's hard-eh-I give up", "I don't know", "make them sound like something else","new words", etc. to the question asking them how words are used in sentences.

Two children from the poor reader group gave a "I don't know" answer to the use of words question. Two other children from this group suggested that words were used for spelling. When asked how this was accomplished one child's response made no sense whatsoever, ie., "spell". (How do we use words to spell?) "any way". The other child stated "I don't know".

A number of children from the poor reader group stated that words were used "to learn", "to read," "to read and to learn", "writing", etc. When asked how words were used to do these various things, ie., "How do you use words to learn?", the answers ranged from "by looking at them", "by saying the alphabet", to "I don't know".

What Do We Use Sentences For?

Twenty-eight of the children in the good reader group suggested by their answers that sentences were used to convey a message in a larger context. They stated that sentences are used "to put into a story", "telling people what you want to tell them", "so we understand people - what they are saying", "to help make things more clear", etc.

Two children from this group seemed confused with the question. One of these children, after a long pause and the question restated, (after the child had restated his previous example of a sentence, ie., "Jill fell down the hill.") shrugged to indicate that he didn't know. The other child responded with "eh-well-to use them for- by switching". When asked what this meant the child said he didn't know.

Seventeen of the children in the poor reader group also suggested by their answers that sentences were used to convey a message in a larger context. They stated that sentences are used, "to put in a book...", "for questions ", "to talk to people", "for sometimes letters", "...writing a letter to someone", etc.

Seven children from the poor reader group viewed the function of a sentence as a school work tool, ie., "so

you will learn", "like if the teacher writes on the board", "...for learning words and that", "to work", "for to read", etc.

The remaining answers to the "use of" question were "I don't know".

How Do You Know When You Come To The End Of A Sentence: When You Are Reading? When You Are Speaking?

When You Are Reading (Good Reader Group)

Twenty-eight children in the good reader group stated that a period indicated the end of a written sentence. When questioned further, these children conceded that other types of punctuation marks could also be used to indicate the end of a written sentence, ie., "there's a period", ("Just a period?") "sometimes a question mark".

Two of the children needed no prompting in stating that various types of punctuation signaled the end of a written sentence, ie., "there's a period, question mark, excited mark or a comma or something like that", or "there's a period or a question mark".

When You Are Speaking (Good Reader Group)

Four of the children from the good reader group suggested by their answers that the end of an idea signaled the end of a spoken sentence. Examples of this

type of response are, "when you finish, when you say the whole thing, there's no more to say".

Five of the children from the good reader group suggested that some type of punctuation mark helped them to distinguish the end of a spoken sentence. Examples of this type of response are, "you kind of a question mark or a period", "you see a period at the end", or "when there's a period there".

Two children from this group appeared very confused with this question and simply answered "I don't know".

The remainder of the children in the good reader group reported that the end of a spoken sentence came when "you kind of pause", or "by stopping talking, taking a breath, and then continuing".

When You Are Reading (Poor Reader Group)

Twenty-four children in the poor reader group stated that a period indicated the end of a written sentence. Three other children from the poor reader group called the period a "dot", and stated that this is what ended a sentence, ie., "there's a dot or period". When questioned further a number of these children also conceded that other types of punctuation marks could also be used to indicate the end of a written sentence, ie., "period", ("Just a period?") "and-and-and a question mark sometimes". However, six of these children maintained that

only a period appeared at the end of a sentence or that they were not sure.

Three of the children from the poor reader group needed no prompting in stating that various types of punctuation signaled the end of a written sentence, ie., "period, or a question mark or an exclamation mark".

One child from the poor reader group stated that you "run out of words" at the conclusion of a written sentence and another gave no answer even after having the question repeated and some probing questions.

When You Are Speaking (Poor Reader Group)

Three of the children from the poor reader group also suggested by their answers that the end of an idea signaled the end of a spoken sentence. Examples of this type of response are: "there's nothing more to say", "because that's all there is to say", or "because there's no more left in the sentence". Nine of the children from the poor reader group referred to the written counterpart of the oral sentence and stated that some type of visual clue also signaled the end of a spoken sentence, ie., "like-eh-there's a period", "we look", "there's a dot", or "when you see where".

Another type of confusion was exhibited by seven other children from this reader group. These children

answered with a tautology , ie.,"when you stop talking", "when you finish a sentence", "you stop where you stop".

The remaining nine children in the poor reader group showed complete confusion. Eight of these children answered with an "I don't know", and the remaining child gave no answer at all.

SUMMARY

This chapter presented the analysis and interpretation of the findings of the present study.

Under the heading Results and Analysis of the Research Questions , six research questions were asked and the corresponding null hypotheses tested for statistical significance. There was no significant difference between the good reader group means and the poor reader group means scored on the child'a ability to recognize or produce the instructional terms - a letter, a word, a sentence. There were significant differences between the good reader group means and the poor reader group means scored on the child's ability to recognize both written and oral suffixes. The good reader group children had very little difficulty with either of these two tasks. The children in the poor reader group had no difficulty with the visual identification of the written suffixes (ed) and (ing). However, the means for this group were

significantly lower than the means for the good reader group in the visual identification of the written suffix (s) and the oral identification of the spoken suffixes /t/, /ŋ/, and /s/.

Under the heading 'Descriptive Analysis Of The Response Of Individual Children Relating To Their Understanding Of Technical Terms Used In The Teaching Of Reading', the responses of the good reader group children and the poor reader group children to the following questions were stated:

What Do You Use Letters For?
What Do You Use Words For?
What Do You Use Sentences For?
How Do You Know When You Come To The End Of A Sentence
When You Are Reading?
When You Are Speaking?

Some children from both the good reader group and the poor reader group had difficulty with each of the above questions. However, the children from the poor reader group seemed to have experienced the most difficulty in answering the questions and it would appear that this group did exhibit the least cognitive clarity.

CHAPTER V

SUMMARY AND CONCLUSION

The purpose of this study was to investigate the differences, if any, in grade two children's comprehension of selected instructional terms used in reading, and their ability to identify written and spoken suffixes.

Four tasks, based on an adapted form of an instrument developed by Francis, were administered to good and poor reader groups drawn from twelve grade two classrooms. The good readers ranked at or above the 75th percentile and the poor readers ranked at or below the 25th percentile on four subtests of the S.A.T., Primary I Battery, using 1974 Edmonton Public School norms.

The four experimental tasks administered by the investigator examined the subjects' understanding of the concepts a word, a letter, and a sentence, by asking them to give 1) oral examples, 2) to recognize written examples, and 3) to express their ideas about how these terms were used. Subjects were further asked to identify written and spoken suffixes.

LIMITATIONS

With any research study certain limitations become clearer as the study progresses. This study was no exception. Thus the following limitations in addition to those noted in

Chapter I must be considered in interpreting the findings.

Although every effort was made to keep the directions and interpretations objective, it is possible that some investigator bias may have been introduced. It would have been better had a double blind procedure been used.

The child's responses give us insight into how the child thinks. Depending upon the task, the child may respond in such a manner as to indicate performance and not necessarily competence. This must be acknowledged in interpreting the data.

SUMMARY OF THE FINDINGS

The findings of this study were as follows:

1. There was no significant difference between the "good" and "poor" reader groups in responding with

a) oral examples of the instructional terms, a letter, a word, and a sentence.

b) recognizing written examples of the terms, a letter, a word, and a sentence.

c) oral examples of the instructional terms, a letter, a word, and a sentence, as opposed to identifying written examples of the instructional terms, a letter, a word, and a sentence.

2. A descriptive analysis of children's responses relating to their understanding of selected terms used in

reading revealed the following

a) Many children in the "good" reader group and some children in the "poor" reader group showed that they had a good idea of the use of letters, words, and sentences. These children appeared to understand that letters went together in a sequence to make words, and words were used in some form of sentence, either spoken or written, to convey a message. They also seemed to understand that sentences were used to convey a message in a larger context.

b) Confusion appeared to rule with a few children in the "good" reader group and with many children in the "poor" reader group when they were asked about their ideas on the use of the terms a letter, a word, and a sentence. Many of these children could not give an explanation as to the use of these terms, and those that attempted an answer did so with confused and vague answers.

CONCLUSIONS AND DISCUSSIONS

The results of this study partially corroborate the findings of Reid (1958;1966), Downing (1970;1974), Bruce (1964), Metzer and others (1969), and Francis (1973), but with readers at the second grade level not just in the early stages of learning to read. The earlier studies indicated that the beginner's concepts of a letter, a word, and sentence were vague and confused. Further, in those studies the confusion became less as the children progressed in the reading program,

suggesting a developmental process which appears to go from a state of "cognitive confusion" to a state of "cognitive clarity". However, for some children in those earlier studies, this confusion appeared to exist even in the later stages of grade one. The present study has shown that some children as late as the end of grade two exhibit varying degrees of confusion.

In the Francis study it was reported that children had more difficulty with the task of producing oral examples of letters, words, and sentences as opposed to identifying written examples of these terms. The present study also identified this trend. Neither the "good" nor the "poor" reader groups had trouble identifying written examples of the terms. However, eight members of the "poor" reader group and four members of the "good" reader group were unable to produce an example of a letter, even after considerable probing.

The findings of the present study are also similar to some of Vygotsky's observations of children's literacy in Russia. He noted that "it is the abstract quality of written language that is the main stumbling block" (Vygotsky, 1974,p.99). Both Reid and Downing use Vygotsky's theoretical framework to explain the child's difficulty in understanding the concept sound, letter, word, and sentence

in that the abstract quality of the terms are the main stumbling block. The children who had difficulty with the tasks presented in the present study very closely resemble those in Reid's and Downing's study. It is proposed that the "cognitive confusion" exhibited by these children is also accountable to the abstract quality of the terms letter, word, and sentence.

Francis (1973) suggested that the children's difficulties with these terms may also be because of the overlap in their application and that they are somewhat ill-defined. Further, she notes that children have never had to analyze speech, but in learning to read are forced to recognize units and subdivisions. The children who had little or no difficulty with the tasks presented in this study seem to confirm this hypothesis. These children have a good understanding of the terms a letter, a word, and a sentence. This understanding seems to have developed as the children analyzed speech in their reading program. It would appear that these children have developed a degree of metalinguistic ability through the act of learning to read

RECOMMENDATIONS FOR FURTHER RESEARCH

Research studies tend to raise more questions than they answer and this is also true in this study. The following

suggestions are made regarding further areas for investigation.

1. The present study found that "good" and "poor" grade two readers had no difficulty visually identifying examples of the written instructional terms, a letter, a word, and a sentence. While it would not appear productive to pursue this line of investigation with these terms, a study designed to inquire about children's ability in identifying other terms often used in reading instruction may be of value.

2. The present study found that the "good" grade two readers had very little difficulty producing oral examples of the instructional terms, a letter, a word, and a sentence. Although the "poor" grade two readers also had little difficulty producing examples of these terms, they did encounter more difficulty in producing an example of a letter. While it would not appear productive to pursue this line of investigation with these terms, a study designed to inquire about children's ability in producing other terms often used in reading instruction may be of value. Further, a small number of "good" and "poor" grade two children exhibited difficulty with this task. This has pedagogical implications for the teacher of reading which will be discussed later under Implications for Teaching.

3. Many "poor" grade two readers showed confusion when asked about the function of letters, words, and sentences. Confusion was also evident with these children when questioned about how letters and words were used. A replication and extension of the present study dealing with the degree of understanding by further questioning about function and use, may prove productive.

4. The present study attempted to ascertain the grade two children's understanding of the selected terms, a letter, a word, and a sentence. A further study dealing with children's understanding of other technical terms specific to new reading programs may prove productive.

IMPLICATIONS FOR TEACHING

A small number of grade two children exhibited difficulty with the task of producing examples of the terms, a letter, a word, and a sentence. Further, these children appeared confused when asked the function and use of these terms. These findings have pedagogical implications for the reading teacher. It cannot be assumed by the reading teacher that all children at a grade two level have a clear understanding of general technical terms used during reading instruction. This problem may also exist with some children when the reading teacher uses terminology specific to new reading programs. Although some

authors suggest that terms specific to a reading program should be "taught", it cannot be assumed that even after such instruction that all children will have a clear understanding of the terms. Thus, difficulty in understanding the technical vocabulary of reading instruction appears to be part of the difficulty of learning to read and terms should be taught and used in a consistent and appropriate manner by teachers in helping children to understand them.

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APPENDICES

APPENDIX A

DESCRIPTIONS OF SELECTED SECTIONS OF THE STANFORD ACHIEVEMENT TEST

DESCRIPTION OF SELECTED SECTIONS OF THE STANFORD ACHIEVEMENT TEST

This test is designed for use with students from grade one to nine inclusive. The test is organized into five batteries for the various grades and covers several subject areas. Primary I Battery was designed to be administered by the end of grade one and contains subtests for word meaning, paragraph meaning, vocabulary, spelling, word study skills, and arithmetic. For the purpose of this study, scores from the subtests for word meaning, paragraph meaning, vocabulary, and word study skills were used to establish groups of good and poor readers.

The authors of the test sought to insure content validity by examining appropriate courses of study and text books as a basis for determining the skills, knowledges, understandings, etc., to be measured. Reliability coefficients reported by the authors for subtests range from .79 to .95 (S.A.T. Manual, 1964).

The word reading subtest consists of 35 items graduated in difficulty which measure the ability of a student to analyze a word without the aid of context. The subtest employs a multiple choice item format in which the students are required to look at a picture and then select the word, from a group of four words, which stands for the

picture. Students are stopped after 15 minutes and each student's total of correct responses is recorded.

The vocabulary subtest employs a multiple choice type of item in which the student is required to select from a series of three alternatives the best answer to a question or a statement read by the teacher. The authors report that the items measure knowledge of synonyms, simple definitions, and associations. Students are stopped after 35 minutes and each student's total of correct responses is recorded.

The paragraph meaning subtest consists of a series of paragraphs, graduated in difficulty, from which one or more words has been omitted. Students are to demonstrate their comprehension of the paragraphs by selecting the correct word for each omission from a choice of four words. The test provides a measure of the child's ability to comprehend connected discourse ranging in length from single sentences to paragraphs of six sentences. The authors report that the skills tested extend from simple recognition to making inferences from several related sentences. Students are stopped after 25 minutes and each student's total of correct responses is recorded.

The word study skills subtest includes 56 multiple choice items testing for auditory perception of beginning sounds, auditory perception of ending sounds,

phonics and rhyming words. In each case the student is asked to match a word which he hears with a word which he reads. Students are stopped after 29 minutes and each student's total of correct responses is recorded.

Two sets of normative data are available. The raw scores for all of the above subtests can be normed, using the grade score, percentile score, and stanine score tables available with the S.A.T. The Edmonton Public School System has also established local norms for the S.A.T. and these were used in this study.

APPENDIX B

THE INSTRUMENT USED IN THE PRESENT STUDY

Understanding Of Concepts

Can you tell me a letter any letter you know?

What do we use letters for?

Can you tell me a word any word you know?

What do we use words for?

Can you tell me a sentence any sentence you know?

What do we use sentences for?

How do you know when you come to the end of a sentence:
When you are reading?

When you are speaking?

Understanding of Concepts Letter, Word, Sentence.

Recognition task.

Lets look at this page. There are six boxes on the page. --box 1, box 2, box 3, box 4, box 5, box 6,

Are there any boxes that have a letter in it?
Can you show me a box that has a letter in it?

Take your pencil and circle a letter.

Are there any boxes that have a word in it?
Can you show me a box that has a word in it?
Take your pencil and underline the whole word.

Are there any boxes that have a sentence in it?
Can you show me a box that has a sentence in it?
Take your pencil and underline the whole sentence.

1 went

2 Saturday

3 t

4 The sun was blazing and the robins sang in the trees.

5 p

6 Jack had fun on his hike.

1 M

2 birthday

3 o

4 He got a pencil from his pocket and began to make a list.

5 bicycle

6 It was a fine time to be hiking.

Auditory Identification Of Suffixes

I am going to say three words. I want you to listen to the three words and tell me the two that sound the same in some way. Then I want you to tell me how they sound the same.

Listen.

jumped splash marked

How do they sound the same in some way/?

train riding smoking

How do they sound the same in some way?

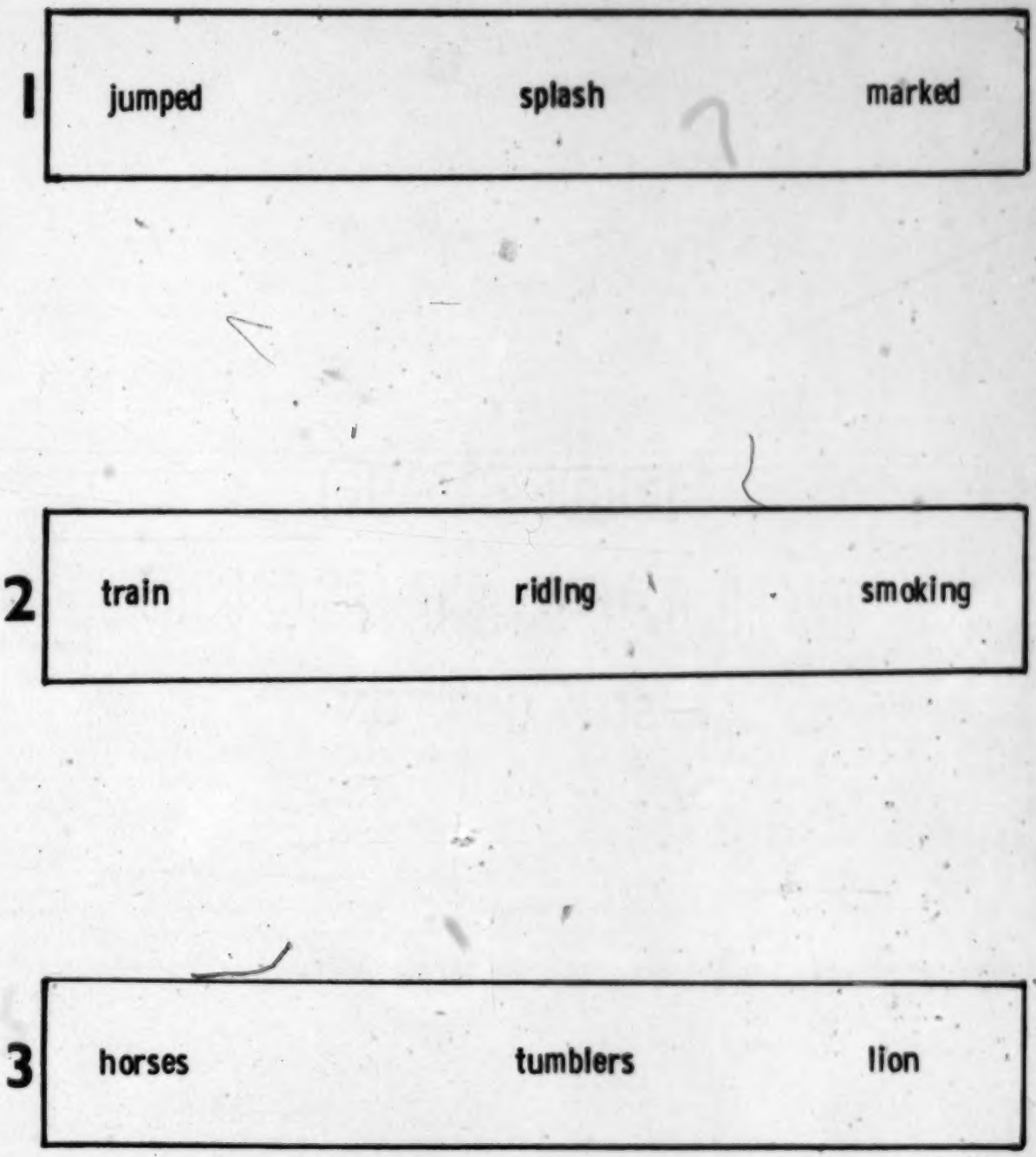
horses tumblers lion

How do they sound the same in some way?

Visual Identification of Suffixes

Look at this page. There are three boxes on the page. Box 1, Box 2, Box 3.

Lets look at each box separately. (Mask the other two boxes)
I want you to look carefully at the three words in this box. I want you to point to the two words that look the same in some way.
Now circle the parts of the words that look the same.


1
jumped
splash
marked
2
train
riding
smoking
3
horses
tumblers
lion

APPENDIX C

CHILDREN'S RESPONSES TO THE QUESTIONS:

CAN YOU TELL ME A LETTER?
WHAT DO WE USE LETTERS FOR?

QUESTION: "Can you tell me a letter, any letter you know?"

CODE: High Readers(1), Boys(1), Identity(x)
High Readers(1), Girls(2), Identity(x)

RESPONSES:

1,1,53	a	1,2,50	n
1,1,19	t	1,2,56	m
1,1,31	a	1,2,32	s
1,1,55	writing a note;g	1,2,54	a
1,1,43	h	1,2,47	l
1,1,38	r	1,2,51	p
1,1,37	[?]	1,2,52	a
1,1,42	c	1,2,36	b
1,1,61	g	1,2,39	c
1,1,62	a letter you send	1,2,44	l
1,1,46	b	1,2,40	a
1,1,4	c	1,2,8	g
1,1,5	[x], no	1,2,10	a
1,1,6	e	1,2,63	m
1,1,7	n		
1,1,9	f		

Boys		Girls
13	first answer	14
1	a letter you send	0
0	two kinds	0
2	phoneme	0
16	+	14

30

QUESTION:"Can you tell me a letter, any letter you know?"

CODE: Low Readers(2), Boys(1), Identity(x)
Low Readers(2), Girls(2), Identity(x)

RESPONSES:

2,1,58 a
2,1,60 a
2,1,24 a
2,1,27 w
2,1,19 how
2,1,23 a
2,1,20 t
2,1,21 b
2,1,26 a
2,1,34 no
2,1,33 t
2,1;35 no response (repeat) I can't think of one.
2,1,1 u
2,1,12 a
2,1,13 b (after question was repeated)
2,1,14 g
2,1,18 a
2,1,16 a

2,2,59 t; after clarifying question
2,2,29 a,t,s,
2,2,57 a
2,2,28 a letter from my aunt
2,2,22 p
2,2,3 initially 'ten'; answer to"Any other letter?": b,c.
2,2,2 no response
2,2,11 [?]
2,2,15 a
2,2,17 letter you send; "Can you tell me any other kind of letter?") no.
2,2,30 b

Boys		Girls
14	first answer	6
1	question repeated	1
1	'no'	1
1	(I can't think of one)	2
	(a letter you send)	
1	a word	1
	(no response)	1
	(phoneme)	1
18		12

18+12=30

QUESTION: What do we use letters for?

CODE: High Readers(1), Boys(1), Identity(x)

RESPONSES:

1,1,53 spelling words ("How do we use letters to spell words?") put them together.

1,1,49 spelling words ("How do we use letters to spell words?") putting them in the correct order and getting some sense out of the letters that make up words.

1,1,31 spelling words ("How do we use letters to spell words?") put them in their right order.

1,1,43 names and words (How do we use letters for names and words?") put them beside each other.

1,1,38 words ("How do we use letters for words?") making words. ("How do you use them for making words?") by putting them in order to make a word.

1,1,37 printing and writing and making words ("How do we use letters for printing and writing and making words?") we-eh- I think we use them because we have an alphabet so we can write letters.

1,1,42 words ("How do we use letters for words?") so we can read them.

1,1,61 spell words ("How do we use letters to spell words?") well we put letters in a special way to make words somehow.

1,1,62 (was confused about the type of letter and was unable to think of a letter from the alphabet.

1,1,46 spelling ("How do we use letters for spelling?") I don't know this.

1,1,4 to make words ("How do we use letters to make words?") put them together.

1,1,5 (was able to only think of a letter as writing a message to someone- not as a letter of the alphabet.)

1,1,6 eh-for reading ("How do we use letters for reading?") by putting them together and make words.

1,1,7 words ("How do we use letters for words?") taking a few number of them and putting them together.

1,1,9 spelling things ("And how do we use letters to spell things?") putting them together and making words.

QUESTION: "What do we use letters for?"

CODE: High Readers(1), Girls(2), Identity(x)

RESPONSES:

1,2,50 to make words ("How do we use letters to make words?") you put them together.

1,2,56 to spell words ("How do we use letters to spell words?") they go together.

1,2,32 words ("How do we use letters for words?") you put them together.

1,2,54 to use-to make words. ("How do you use letters to make words?") you sound them out and then you know how to put them together.

1,2,47 to make words ("How do you use letters to make words?") like you sound them out and put them in together like you sound them and put them together like in 'big' you have a B-I-G and then you write the letters down.

1,2,51 to spell words ("How do we use letters to spell wrods?") by putting them in order how the word sounds.

1,2,52 spelling ("How do you use letters for spelling?") making words.

1,2,36 to make words. ("How do you use letters to make words?") you spell them like [t]-[r]-[æ]-[s].

1,2,39 spell ("How do we use letters to spell?") to make words. ("How do you letters to make words?") put them in sentences.

1,2,44 to spell ("How do you use letters to spell?") by sounds. ("How do you use letters to spell by sounds?") (no response.)

1,2,40for spelling ("How do we use letters for spelling?") well you can put lots of them together and make a word.

1,2,8 to-so we can make words. ("How do we use letters to make words?") like in 'can' its [k]-[æ]-[n], thats a word.

1,2,10 for words ("How do you use letters for words?") you put them together.

1,2,63 making words ("How do you use letters to make words?") by putting words together that make sense-letters I mean.

QUESTION: "What do we use letters for?"

CODE: Low Readers(2), Boys(1), Identity(x).

RESPONSES:

2,1,58 to spell words ("How do you use letters to spell words?") to make words.

2,1,60 to write with ("How do you use letters to write with?") like to write words. ("How do you use letters to write words?") (pause) I don't know.

2,1,24 spelling words ("How do you use letters to spell words?") by making [t] for 'toy'.

2,1,27 like writing your name-you need for letters. ("Do you need them for anything else?") count them ("How do you count letters?") you go'one', two', 'three','four'. ("Can you tell me another letter?") 'a'.

2,1,19 to make sentences ("How do you use letters to make sentences?") I don't know.

2,1,23 making words. ("How do you use letters to make words?") like you get some words and put them together and sometimes you make words.

2,1,20 to make words ("How do we use letters to make words?") you get letters and you put them together and if you put certain letters together, you make a word.

2,1,21 em-to make words with ("How do we use letters to make words?") by sounding them out together.

2,1,26 for words ("How do we use letters for words?") well-you print them down and then you make a word.

2,1,34 I don't know.

2,1,33 like-like-[t] when you have [a] for words.

2.1,35 I dont know,

2,1,1 to spell words ("How do we use letters to spell words?") make you smart.

2,1,12 words. ("How do we use letters for words?")put them together.

2,1,13 to write ("How do we use letters to write?") em-(pause) (no response)shrugged to indicate 'I don't know'.

2,1,14 for spelling ("How do we use letters for spelling?") I don't know.

2,1,18 words ("How do we use letters for words?") put them together.

2,1,16 to spell words. ("How do we use letters to spell words?") well, by putting them in words.

QUESTION: "What do we use letters for?"

CODE: Low Readers(2), Girls(2), Identity(x).

RESPONSES:

2,2,59 making words. ("How do we use letters to make words?") (pause) put letters together and try to make a word out of them.

2,2,29 for words. ("How do we use letters for words?") em-(pause) (no response).

2,2,57 to spell things ("To spell what kind of things?") like words and like animals names and people's names. ("How do we use letters to spell things?") put letters together.

2,2,25 to learn to read and to help you tell the words. ("How do they help you tell the words?") by sounding it out.

2,2,28 to write words. ("How do you use letters to write words?") you write them down on a piece of paper.

2,2,22 words ("How do you use letters for words?") eh-in sentences.

2,2,3 to read. ("How do we use letters to read?") (whispered) I don't know.

2,2,2 I don't know.

2,2,11 spelling ("How do we use letters for spelling?") (pause) ("Do you know how you use letters for spelling?") (pause, no answer).

2,2,15 to write things ("How do we use letters to write things?") like words.

2,2,17 I don't know.

2,2,30 to make words ("How do we use letters to make words?") I don't know.

APPENDIX D

CHILDREN'S RESPONSES TO THE QUESTIONS:

CAN YOU TELL ME A WORD?
WHAT DO WE USE WORDS FOR?

QUESTION: "Can you tell me a word, any word you know?"

CODE: High Readers(1), Boys(1), Identity(x)
High Readers(1), Girls(2), Identity(x)

RESPONSES:

1,1,53	bird	1,2,50	hawk
1,1,49	car	1,2,56	lets
1,1,31	level	1,2,32	stop
1,1,55	em-cat	1,2,54	apples
1,1,43	hat	1,2,47	mod
1,1,38*	Roger;and	1,2,51	dog
1,1,37	oven	1,2,52	cat
1,1,42	how	1,2,36	you
1,1,61	play	1,2,39	cookies
1,1,62	hockey	1,2,44	there
1,1,46	tooth	1,2,40	hello
1,1,4	climb	1,2,8	dog
1,1,5	complex	1,2,10	apple
1,1,6	read	1,2,63	happy
1,1,7**	tape recorder		
1,1,9	length		

* ("Can you tell me another word that you know?") and

** ("Is that one word?") two

Boys		Girls
14	word	14
1	word, then name	0
1	two words qualified	0
16	+	14

30

QUESTION: "Can you tell me a word, any word you know?"

CODE: Low Readers(2), Boys(1), Identity(x)
Low Readers(2), Girls(2), Identity(x)

RESPONSES:

2,1,58*	Darcy; Jill	2,2,59	letter
2,1,60	big	2,2,29	sun,ran,bunny
2,1,24	yes	2,2,57	horse
2,1,27	water	2,2,25	camel
2,1,19	what	2,2,28	cat
2,1,23	because	2,2,22	cat
2,1,20	all	2,2,3	eleven
2,1,21	cat	2,2,2	bear
2,1,26	stony	2,2,11	walk
2,1,34	L	2,2,15	me
2,1,33	surprise	2,2,17	friend
2,1,35	talk	2,2,30	cat
2,1,1	no		
2,1,12	dog		
2,1,13	you		
2,1,14	like		
2,1,18	the		
2,1,16	and		

*("Can you tell me another word that you know?") Jill

Boys		Girls
16	word	12
1	name(s)	0
1	letter	0
18	+	12
	30	

QUESTION: "What do we use words for?"

CODE: High Readers(1), Boys(1), Identity(x)

RESPONSES:

1,1,53 to put into a sentence ("How do we put words into a sentence?") (pause) you put them together.

1,1,49 making sentences ("How do we use words to make sentences?") you put words together which make up a sentence and this sentence has to make-the words put together have to make sense-or-the sentence won't make any sense and you won't be able to understand it.

1,1,31 to make sentences ("How do you use words to make sentences?") you put them in the right order.

1,1,55 to make sentences. ("How do you use words to make sentences?") em-to make it have sense.

1,1,43 for sentences ("How do we use words for sentences?") when you put words beside other words.

1,1,38 so we can make sentences out of them. ("How do we use words to make sentences?")I don't know.

1,1,37 to talk. ("How do we use words to talk?") (Pause) shrugged to indicate 'I don't know'. (Can we use words for anything else but talking?") for writing and printing. (How do we use words for writing and printing?") put them together.

1,1,42 say things ("How do you use words to say things?") with our voices (Can we use words for other things?") yes. ("like?") directing people (Can we use words for other things-other than talking?") humming.

1,1,61 to tell people something ("How do we use words to tell people something?") well-em-we make them into a sentence.

1,1,62 to help you describe what you want to do. ("How do you use words to help you describe what you want to do?") well-eh-you talk to a person and they-like-you can do it and eh-they just say you can and take these courses to do what you want to do and if you pass them you do what you want to do. ("Can you use words for other things than talking?") well what do you mean? ("Are words used for other things than talking?") eh-yes ("What?") oh-hand-talking. ("and?")eh-printing like writing. ("how?") by putting them together to make sense.

1,1,46 to make up sentences ("How do we use words to make up sentences?") we put the words in order.

.....continued

....continued

1,1,4 to make sentences ("How do we use words to make sentences?") put them together.

1,1,5 yeh-to read. ("How do we use words to read?") I don't know.

1,1,6 words for-so you can talk. ("Do we use words for anything else?") (But talking"?)books. ("How?") by putting them together one after the other.

1,1,7 to say a meaning of something ("How do we say a meaning of something?") (pause) ("What do we do to words to get meaning?")put them politely together.

1,1,9 telling things ("And how do we use words to tell things?") by putting them into a sentence.

QUESTION:"What do we use words for?"

CODE: High Readers(1), Girls(2), Identity(x).

RESPONSES:

1,2,50 to make sentences ("How do you use words to make sentences?") eh-I don't know

1,2,56 to read ("How do you use words to read?") (pause) well-eh-you-eh(pause) well you spell the words and sound out the words.

1,2,32 so people could read ("How do people use words to read?") well with letters.

1,2,54 to make sentences and to tell people things ("How do you use words to make sentences?")by putting them together and making sense.

1,2,47 to make sentences ("How do you use words to make sentences?")like you get them sort of space them out so they'll make sense.

1,2,51 to make sentences ("How do you use words to make sentences?")by-eh-putting a word after another in a row to make a sentence.

1,2,52 to talk ("How do you use words to talk?") (pause) ("Do you use words for other things?")yes ("What?") for writing letters ("How do you use words for writing letters?") (pause shrugged to indicate 'I don't know'.)

1,2,36 to make sentences- if you don't have words you couldn't communicate with each other. ("How do we use words to make sentences?") We put them one after the other like 'Why do cavities hurt your teeth?'

1,2,39 read ("Do we use words for something else than reading?") to speak ("How do we use words to read or to speak?") put them together.

1,2,44 using it in a sentence ("How do we use words in a sentence?") by using the alphabet.

1,2,40 things to tell it to people ("How do we use words to tell it to people?") well-em-we can only use words that make sense.

1,2,8 to make sentences ("How do we use words to make sentences?") like-we-have-youmake sentences like 'I see a dog'.

1,2,10 we use them for words and for things important ("How do we use words for things important?") If there's important words, then we just put it together.

.....continued

...continued

1,2,63 making sentences and to tell people something. ("How do we use words for making sentences and to tell people something?") em-well sentences-what was the question again? ("How do we use words to make sentences and to tell people something?") we put words together that make sense into sentences and then if you're asking something to a person you ask him.

QUESTION: "What do we use words for?"

CODE: Low Readers(2), Boys(1), Identity(x).

RESPONSES:

2,1,58 to make sentences ("How do we use words to make sentences?") eh-that's hard-(pause) eh-I give up.

2,1,60 to spell ("How do we use words to spell?") I don't know.

2,1,24 to make sentences and jokes ("How do you use words to make sentences and jokes?") you-(pause) you-using the A.B.C's.

2,1,27 em-like you want to spell the word-something like that.

2,1,19 even to make sentences ("How do you use words to make sentences?") eh-(pause) I don't know.

2,1,23 in sentences ("How do we use words in sentences?") sometimes we make capitals from words at the beginning and small words in the middle of the story.

2,1,20 to say things in case someone far away- you can write a letter to them and talking to them on the telephone ("How?") put them together.

2,1,21 to talk to people ("How do we use words to talk to people?") by naming them (Do we use words for anything else than talking to people?") by naming sentences.

2,1,26 to make sentences ("How do we use words to make sentences?") to make them sound like something else.

2,1,34 sentences. ("How do you use words for sentences?") put the right words in them.

2,1,33 surprise? words? (Any word")any word? like 'I don't cry'.

2,1,35 words like in sentences ("How do we use words in sentences?") new words.

2,1,1 spell ("How do we use words to spell?") any way

2,1,12 to talk ("How do we use words to talk?") I don't know. ("Can we use words for something else than talking?") no

2,1,13 to learn ("How do we use words to learn?") how to read.

...continued

...continued

2,1,14 helping us read and to learn ("How do we use words to help us read and to learn?") em-(pause) I don't know.

2,1,18 eh-to tell people ("How do we use words to tell people?") we write words? ("Do we use words for something other than writing?") spelling

2,1,16 for telling people something ("How do we use words for telling people something?") like putting them in letters to people.

QUESTION: "What do we use words for?"

CODE: Low Readers(2), Girls(2), Identity(x)

RESPONSES:

2,2,59 making up sentences ("How do we use words to make up sentences?")-(pause) put some words together and try to make some sentences out of them.

2,2,29 to talk so people understand ("How do we use words to talk?") put them together.

2,2,57 to say sentences ("How do we use words to say sentences?") (pause) I don't know.

2,2,25 to read ("How do we use words to read?") by looking at them.

2,2,28 to make sentences ("How do you use words to make sentences?") you make them up so that it doesn't look like all the letters are together and it makes them a whole bunch of messy words.

2,2,22 sentence ("How do you use words for sentences?") by talking ("Can you use words for sentences another way?") by hands ("How do you use them by hands-what do you do?") write ("How?") put them together.

2,2,3 shrugged to indicate 'I don't know'. ("Say it out loud for the -) to read. ("How do we use words to read?") shrugged I don't know.

2,2,2 (pause) shrugged to indicate 'I don't know'.

2,2,11 to know what we're needing ("How do we use words to know what we're needing?") (pause)(no answer)

2,2,15 writing ("How do we use words to write?") by saying the alphabet.

2,2,17 to write sentences and to write a distance ("How do we use words to write sentences?") well if we use a capital letter we put a capital letter like 's' with a capital 'S'.

2,2,30 to make sentences and stories and paragraphs ("How do we use words to make sentences and paragraphs and stories?") we make stories and tell something-like.

APPENDIX E

CHILDREN'S RESPONSES TO THE QUESTIONS:

CAN YOU TELL ME A SENTENCE?
WHAT DO WE USE SENTENCES FOR?
HOW DO YOU KNOW WHEN YOU COME TO
THE END OF A SENTENCE WHEN YOU ARE:
READING?
SPEAKING?

QUESTION : "Can you tell me a sentence, any sentence you know?"

CODE: High Readers(1), Boys(1), Identity(x)

RESPONSES:

1,1,53 The girls and boys are playing ball.
1,1,49 I am a dog called 'Brownie'.
1,1,31 I went fishing.
1,1,55 My sister has a kitten.
1,1,43 Bob went to the bathroom to brush his teeth.
1,1,38 Jill fell down the hill.
1,1,37 Aunt Alice ate an apple.
1,1,42 What are you doing today?
1,1,61 Jack and Jill went outside to play with their ball.
1,1,62 When I went to school the dog barked at me.
1,1,46 The bear stole honey.
1,1,4 I live in the city.
1,1,5 I know where my friend lives.
1,1,6 I was reading a book about Jack and the Beanstalk.
1,1,7 I went to the market on Friday.
1,1,9 Did you go to the ocean?

QUESTION: "Can you tell me a sentence, any sentence you know?"

CODE: High Readers(1), Girls(2), Identity(x)

RESPONSES:

1,2,50 John goes to school.

1,2,56 I want-I would like a cookie.

1,2,32 The car stopped at the corner.

1,2,54 The telephone is blue and white.

1,2,47 I know a name.

1,2,51 There is a dog.

1,2,52 My sister doesn't keep her room tidy.

1,2,36 The Mississippi River is long.

1,2,39 I love bears.

1,2,44 The bear went home.

1,2,40 Jane went over to her house after school.

1,2,8 Can I see you?

1,2,10 Can you come over to my house?

1,2,63 Today is my birthday.

QUESTION: "Can you tell me a sentence, any sentence you know?"

CODE: Low Readers(2), Boys(1), Identity(x).

RESPONSES:

2,1,58 Matt and Jack were playing in the sand box.

2,1,60 I know a man.

2,1,24 I like to go hunting in the big forest.

2,1,27 I know a little dog.

2,1,19 This is fun.

2,1,23 Jack and Jill- no that's not a sentence-Jack and Jill fell down the hill.

2,1,20 The boy has a ball.

2,1,21 The cat sat on the mat.

2,1,26 I like you.

2,1,34 I like it here.

2,1,33 I know who is a big boy.

2,1,35 I could write you a letter.

2,1,1 This is my house.

2,1,12 A cat ran after a mouse.

2,1,13 Once upon a time there was a little lamb.

2,1,14 The rabbit jumped up the hill.

2,1,18 I want to go to the parade.

2,1,16 A man is over there.

QUESTION: "Can you tell me a sentence, any sentence you know?"

CODE: Low Readers(2), Girls(2), Identity(x).

RESPONSES:

2,2,57 Mrs. Bourcier is in the room.

2,2,25 Come with me.

2,2,28 We went to Alberta Beach.

2,2,22 That is their cat.

2,2,3 Sally was playing skipping.

2,2,2 I like watching T.V.

2,2,11 Can I go out and play?

2,2,15 Why are you mad?

2,2,17 My friend is going.

2,2,30 A glass ball.

2,2,59 I like to hear letters.

2,2,29 I know a cat named Frisky.

QUESTION: "What do we use sentences for?"

CODE: High Readers(1), Boys(1), Identity(x) .

RESPONSES:

1,1,53 to put into a story.

1,1,49 telling people what we want to tell them ("How do we use sentences to tell people what we want to tell them?") well-we put a certain number of words together that make sense-tell what you want to tell and-em-when one sentence is done you go on to another and another and so on until it makes up a story of what you want to tell about.

1,1,31 em-so you can tell other people things. ("How do you use sentences to tell other people things?") You put the sentences in the right order.

1,1,55 to make-em-to make sense.

1,1,43 like in -if you're going to make a story, you use sentences.

1,1,38 (pause) (shrugged to indicate he didn't know.)

1,1,37 for writing, printing, and talking ("How do we use sentences for writing, printing and talking?") talking we use the mouth and writing we use a pen.

1,1,42 so we understand people-what they're saying.

1,1,61 well, when you're going to tell people something or write a story or something.

1,1,62 to describe ("How do we use sentences to describe?") eh-you tell the thing you saw-like you tell it to a person and they tell it on like maybe a long time ago someone saw this knight and he told it-no he wrote it in a book-nohe told-let's say Hans Christian Anderson-and he wrote it and then it goes over the world - a book.

1,1,46 speaking ("How do we use sentences for speaking?") shrug indicates he doesn't know) ("Can we use sentences for something else than speaking?") em-to have people hear you.

1,1,4 to make-to tell where people live and to talk about someone.

1,1,5 to help make-to help make things more clear.

1,1,6 eh-for stories ("How do we use sentences for stories?") eh-em-its hard-can't think of it.

1,1,7 em-to tell where we went someplace or what we're going to do.

1,1,9 eh-telling things ("How do we use sentences to tell things?") by putting a period at the end.

QUESTION: "What do we use sentences for?"

CODE: High Readers(1), Girls(2), Identity(x).

RESPONSES:

1,2,50 (pause) to eh-to eh-(pause) to make poems or stories.

1,2,56 to talk ("How do we use sentences to talk?") (pause) (no response)

1,2,32 for a story ("How do we use sentences for a story?") you put them together.

1,2,54 to tell people-well to describe things or to ask names-or to tell how old you are.

1,2,47 to tell people something so they can read and maybe like if like they were writing a letter.

1,2,51 to put things together to tell something.

1,2,52 to write stories ("How?") you put them in an order to make sense.

1,2,36 eh-well-to use them for-by switching ("by switching?") eh-(pause) I don't know.

1,2,39 talk about things ("How?") put them in order.

1,2,44 if you didn't, you couldn't ask any questions (Can you use sentences for other things?") brushing your teeth and all sorts of things ("For sentences?-or is that a sentence you said?") a sentence.

1,2,40 tell people something ("How do you use sentences to tell people something?") em-well-keep on talking to someone to understand them.

1,2,8 so that if we can write letters and things like that. ("Can we use sentences for something else than writing?") yeh ("What?") to say things in speech.

1,2,10 for telling people something ("How do we use sentences to tell people something?") em-oh boy-you can tell them something and stuff.

1,2,63 telling people things ("How do we use sentences to tell people things?") by telling em-what was that question again? (sentence was repeated) we tell people sentences that are asking or giving answers that are telling people something interesting.

QUESTION: "What do we use sentences for?"

CODE: Low Readers(2), Boys(1), Identity(x)

RESPONSES:

2,1,58 eh-(pause) so you will-so you will learn ("So you will learn what?")(pause-no response).

2,1,60 like if the teacher writes on the board-then its a sentence.

2,1,24 to put in a book and you can read them or write them down on a piece of paper ("Can you do anything else with sentences?") I don't know.

2,1,27 for questions - like you use a question to talk to somebody ("Can you use sentences for something else?") em-' A little dog chased a cat'.

2,1,19 to talk-talk to people ("Can we use sentences for something else?") yes ("What?") we can use them to write stories ("How?") I don't know.

2,1,23 making books for children ("Can we use sentences for other things?") yes-stories.

2,1,20 to talk to people and that is all ("Can we use sentences for anything else other than talking to people?") em-yes ("What?") we can use it for-em-for describing things-if you really like something you can talk to it like a plant or something.

2,1,21 for talking to people ("How do we use sentences to talk to people?") by sounding the words.

2.1.26 for-sometimes letters ("What kind of letters?") writing letters to people.

2,1,34 talking ("Can we use sentences for other things?") yes ("What?") (pause shrugged to indicate he did not know).

2,1,33 sentences for? for-for some reason-for learning words and that.

2,1,35 like in-if you were writing a letter to someone. ("How would you use sentences if you were writing a letter to someone?") 'I gave a gift'.

2,1,1 tell you-eh (pause) to tell you everything-eh-(pause) what you do.

2,1,12 to work ("How do we use sentences to work?") write down.

2,1,13 for to read ("How do we use sentences to read?"). to learn.

2.1.14 em- I don't know.

....continued

...continued

2,1,18 for telling people stuff ("How do we use sentences to tell people stuff?") eh-we-we tell- I don't know.

2,1,16 em-telling people things ("How do we use sentences to tell people things?") like putting them in- like making them to say something.

QUESTION: "What do we use sentences for?"

CODE: Low Readers (2), Girls(2), Identity(x).

RESPONSE:

2,2,59 telling people things ("How do you use sentences to tell people things?") (pause-no response).

2,2,29 to talk ("How do we use sentences to talk?") eh-(pause-no response) ("Do we use sentences only to talk?") no-(pause) ("What else do we use sentences for?") em (pause) so teachers can hear you thinking.

2,2,57 like to say out words-like sometimes there's a missing word (referring to a fill-in-the-blank experience).

2,2,25 em-to learn how to read ("How do you use sentences to learn how to read?") em-(pause) by looking at them.

2,2,28 to write in our books ("Do you use sentences for other things than writing?") you can make up your own words.

2,2,22 telling things ("How do you use sentences to tell things?") talk ("Can you use sentences to tell things another way?") eh-writing.

2,2,3 em-I don't know.

2,2,2 (pause-shrugged to indicate 'I don't know'.)

2,2,11 so you can read on.

2,2,15 writing a letter to the cleaners.

2,2,17 em-to give it to other people to know what we're telling about.

2.2.30 to tell people things ("How do we use sentences to tell people things?") em-I don't know that.

QUESTION:"How do you know when you come to the end of a sentence when you are.....?"

CODE: High Readers(1), Boys(1), Identity(x)

RESPONSES:

1,1,53 reading- a period or a quotation mark.
speaking-you kind of pause.

1,1,49 reading-when a period, exclamation mark,question mark.
speaking-by stopping talking, taking a breath, and then continuing.

1,1,31 reading-there's a period ("Just a period?") or a question mark.
speaking- because you know you're finished.

1,1,55 reading-there's a period ("Just a period?") not all the time ("What else can we use?") exclamation mark.
speaking-you pause.

1,1,43 reading- there's a period ("Just a period?") (pause) ("Can there be anything else?") em-question mark, exclamation mark.
speaking- you stop and take a breath.

1,1,38 reading-there's a period ("Just a period?")sometimes a question mark.
speaking- you stop.

1,1,37 reading- there's a period ("Just a period?") that's all there is. ("Can there by anything else?") question mark.
speaking- when you're finished.

1,1,42 reading- a period ("Just a period?") (pause) no, not really ("Can there be something else?") a question mark.
speaking- that's when you want to stop.

1,1,61 reading- because there's a period ("Just a period?") well, there could be question mark or something like that.
speaking-em-well I don't know.

1,1,62 reading- there's a period, question mark, excited mark or a comma or something like that.
speaking- you stop, pause.

1,1,46 reading- there's a period ("Just a period?") no, sometimes a question mark, exclamation marks.
speaking- so that you come to the end of a sentence.

1,1,4 reading- a period ("Just a period?") a question mark
speaking-when you say the whole thing.

...continued

...continued

1,1,5 reading- a period ("Just a period?") sometimes maybe a question mark.
speaking-you kind of a question mark or period

1,1,6 reading- by period ("Just a period?") eh-and-eh exclamation mark
speaking-eh-(pause) that's hard to. I can't answer that one.

1,1,7 reading- there's a period after ("Just a period?") there's no more to read ("Can there be something else at the end?") a question mark.
speaking- there's no more to say.

1,1,9 reading- there's a period at the end ("Just a period?") no there could be an exclamation mark or a question mark.
speaking- I guess you say'I went home'and that's the end of a sentence.

QUESTION: "How do you know when you come to the end of a sentence when you are.....?

CODE: High Readers(1), Girls(2), Identity(x)

RESPONSES:

1,2,50 reading- there's a period there ("Just a period?") well maybe there's a period,an exclamation mark, or eh-comma or any of those kinds of marks. ("A comma?") well no, not a comma, eh-question mark, a period, exclamation mark, and a question mark.
speaking- eh (pause) eh what is that again please? (question repeated) eh-you might get out of breath.

1,2,56 reading- when there's a period ("Just a period?") a comma or question mark or anything like that
speaking-(pause) when there's a quotation marks or anything like that.

1,2,32 reading- there's a period or a question mark
speaking- well you stop.

1,2,54 reading- you use a period ("Just a period?") you use an exclamation mark or question mark or a period

1,2,47 reading- period ("Just a period?") well maybe a question mark or an exclamation.
speaking- you stop and then you start over again.

1,2,51 reading- when there's a question mark, a period or an exclamation mark.
speaking- when you stop for a minute or two.

1,2,52 reading- there's a period ("Just a period?") no ("What else?") a question mark, an exclamation mark a comma and apostrophies ("Commas?") no
speaking- (pause) you stop.

1,2,36 reading- there's a period ("Just a period?") or an exclamation mark or a question mark.
speaking- you've had that experience before.

1,2,39 reading period tells you to stop. ("Just a period?") exclamation mark
speaking- you stop when you want to

1,2,44 reading- there's a period ("Just a period?") not always ("What else?") a question mark
speaking- there's a period

1,2,40 reading-there's a period ("Just a period?") yes ("Can there be something else?") yes ("What?") a question mark.
speaking- you see a period and you stop.

...continued

...continued

1,2,8 reading- there's a period, comma, question mark ("Is a comma at the end of a sentence?") no- not usually ("Can there be a comma at the end of a sentence?") yes

speaking- I know how to do it. I just say something eh-when I want to stop. ("And when you stop that's the end of a sentence?") em-like, I say a sentence and then I stop, because that's when you stop.

1,2,10 reading- you can see a period and a question mark

speaking- you can like-you can talk and don't just keep on going because and you put a period at the end.

1,2,63 reading- you stop at a period ("Just a period?") an exclamation point or a question mark.

speaking- when there's a period there.

QUESTION: "How do you know when you come to the end of a sentence when you are .....?

CODE: Low Readers(2), Boys(1), Identity(x)

RESPONSES:

2,1,58 reading- there's a period ("Just a period?")(pause) I think so ("Can there be anything else?") no
speaking- (pause) eh-its hard (pause) I don't know

2,1,60 reading- a period ("Just a period?") no a question mark.
speaking- when you stop.

2,1,24 reading the period ("Anything else?") no("There can't be anything else?") no
speaking- eh (pause) I don't know what its called but like the dot on the bottom.

2,1,27 reading- you put a period ("Just a period?") and eh-a small letter at the end ("What kind of a small letter at the end?") 'e' ("Any other?") 'd'.
speaking- (pause) when you finished the sentence.

2,1,19 reading- It has a period ("Just a period?") or a question mark.
speaking- eh (pause) no response.

2,1,23 reading-there's a period ("Just a period?") sometimes a comma ("a comma?") a question mark. ("Is there a comma at the end of a sentence?") no ("Why isn't there a comma at the end of a sentence?") eh-because there's certains that ends something like lets.
speaking-(pause) em-there can be no other line near it.

2,1,20 reading- there's a period or sometimes a question mark.
speaking-because there is nothing more to say at the end of that sentence.

2,1,21 reading- you always put a period ("Just a period?") quotation marks and eh-em- and another mark but I forgot the name of it.
speaking- (pause) I don't know.

2,1,16 reading- a period ("Just a period?") yes ("Can there be something else?") (pause) (no answer, shrugged indicating 'I don't know'.)
speaking- when you stop talking.

2,1,34 reading- you run out of words ("Is there any other way of knowing?") yes ("How?") because that's when you quit reading.
speaking- you stop talking.

....continued

...continued

2,1,33 reading- because there's a period or question mark.
speaking- you stop where you-you stop.

2,1,35 reading-period ("Just a period?") no ("Anything else?") I don't know
speaking- period, also a straight line and a dot.

2,1,1 reading-there's a period ("Just a period?") ("Can there be anything else?") yes ("What?") extra mark and eh-(pause).
speaking- you stop.

2,1,12 reading- period ("Just a period?") yeh ("Can there be something else at the end of a sentence?") yes ("What?") an apostrophe.
speaking- (no response)

2,1,13 reading- there's a dot or period ("Can there be something else?") question mark.
speaking-em-there's a dot.

2,1,14 reading- there's a dot at the end ("Anything else?") question mark.
speaking-we look

2,1,18 reading- period ("Just a period?") and-and-and a question mark sometimes.
speaking- because that's all there is to say.

2,1,16 reading- there's a period ("Just a period?") (pause) ("Can there be something else?") no
speaking- em-(pause)-(shrugged to indicate he did not know).

QUESTION: "How do you know when you come to the end of a sentence when you are .....?

CODE: Low Readers(2), Girls(2), Identity(x)

RESPONSES:

2,2,59 reading- you see a period ("Could there be anything else at the end of a sentence?") question mark
speaking- (pause, no response).

2,2,29 reading- cause there's a period ("Just a period?") no ("Can there be something else?") question mark
speaking- (pause) what was the question? (Question was repeated) (pause) because there's a period at the end.

2,2,57 reading- like there's a period or a question mark or an exclamation mark.
speaking- like-eh-there's a period.

2,2,25 reading-what do you mean? (question was repeated) by reading it ("Is there any other way?") (pause) ("Is there something that tells you that you've come to the end of a sentence?") (pause, no response).
speaking- when I read it.

2,2,28 reading- by a period ("just a period?") by comma ("a comma?") by a question mark ("You come to the end of a sentence when you see a comma?") no-sometimes ("Yes or No?") em-no.
speaking- you see a period.

2,2,22 reading- there's a period at the end of the sentence ("Just a period?") if there's a question, there's a question mark.
speaking- because there's no more left in the sentence.

2,2,3 reading- sometimes there's a question mark, sometimes there's a period.
speaking- you don't say no more.

2,2,2 reading- there's a period ("Just a period?") ("Can there be something else?") no
speaking- (pause) (shrugged to indicate 'I don't know')

2,2,11 reading- because you got a period ("Just a period?") and a curved thing
speaking-(pause) (sentence repeated) when you see where.

2,2,15 reading- apostrophe ("Anything else?") eh-the kind of thing that goes like this ("Can you make one for me?") yes ("O.K. make one here for me") ?
speaking- I don't know.

...continued

...continued

2,2,17 reading- by you can see a dot ("And anything else?") question mark.
speaking- I don't know

2.2.30 reading- you read em-read when you come to the end ("And how do you know when you come to the end?") when there's a period ("Just a period?") or question mark.
speaking- em-eh-em-I don't know.

APPENDIX F

CHILDREN'S REASONED RESPONSES TO THE:

AUDITORY IDENTIFICATION OF SELECTED SUFFIXES.
VISUAL IDENTIFICATION OF THE CORRESPONDING SUFFIXES.

POOR READERS
GIRLS

AUDITORY IDENTIFICATION OF SUFFIXES

	Auditory Identification			How do they sound the same in some way?		
	/t/	/ŋ/	/s/	/t/	/ŋ/	/s/
K59	jumped marked	NR	horses tumblers	(t)	NR	(s)
K29	jumped marked	train smoking	horses tumblers	they don't have L like splash (r)		(h) and/t/
K57	jumped marked	riding smoking	horses tumblers	(ed)	/ŋ/	(rs)
K25	jumped splash	riding smoking	horses tumblers	(m) and (s) and (sh)	(ing)	(s)
K28	jumped marked	train riding	horses tumblers	(e)	(ai)	(e)
K22	jumped marked	train smoking	tumblers horses	/d/	/ŋ/	/s/
K3	jumped marked	riding smoking	horses tumblers	(ed)	(ing)	(s)
K2	jumped marked	train riding	tumblers lion	I don't know	they both sound the same	NR
K11	marked splash	train riding	horses lion	NR	(ai)	(e)
K15	jumped splash	train riding	horses tumblers	(p)	(i)	(r)
K17	jumped splash	train smoking	horses tumblers	NR	(n)	(u)
K30	INC-R	riding smoking	horses tumblers	INC-R	(r)	(u)

*NR means no response.

*INC-R means incorrect response

POOR READERS
BOYS

AUDITORY IDENTIFICATION OF SUFFIXES

	Auditory Identification			How do they sound the same in some way?		
	/t/	/ŋ/	/s/	/t/	/ŋ/	/s/
K58	NR	train smoking	NR	NR	NR	NR
K60	NR	riding smoking	horses tumblers	NR	I don't know	horse
K24	jumped marked	riding smoking	lion tumblers	(ed)	(ing)	(s)
K27	jumped marked	riding smoking	horses tumblers	(ed)	(ing)	(er)
K19	jumped marked	smoking riding	horses tumblers	(ed)	(ing)	(es)
K23	jumped marked	riding smoking	horses tumblers	/t/	(ing)	/s/
K20	jumped marked	riding smoking	horses tumblers	/ənt/	(ing)	/s/
K21	jumped marked	riding smoking	horses tumblers	(ed)	(ing)	(s)
K26	jumped marked	train smoking	horses tumblers	/t/	/ŋ/	(s)
K34	jumped marked	riding smoking	horses tumblers	(t)	/ŋ/	(s)

.....continued

*NR means no response

*INC-R means incorrect response

POOR READERS

AUDITORY IDENTIFICATION OF SUFFIXES

BOYS.....continued

	Auditory Identification /t/	Auditory Identification /ŋ/	Auditory Identification /s/	How do they sound the same in some way. /t/	/ŋ/	/s/
K33	splash marked	train smoking	house tumblers	(a)	(i)	(o)
K35	jumped marked	train smoking	horses tumblers	(ed)	(n)	(s)
K1	jumped splash	train riding	horses tumblers	(u) and (a)	(ai) and (i)	(um) and (or)
K12	jumped marked	train rising	horses tumblers	(m)	(r)	(u)
K13	jumped marked	train riding	horses lion	NR	(ing)	(ed)
K14	jumped marked	train smoking	horses lion	(t)	did not know	(a)
K18	splash jumped	riding smoking	horses lions	/t/	(ing	(s)
K16	jumped splash	riding smoking	horses tumblers	I don't know	/n/	/z/

*NR means no response

*INC-R means incorrect response

GOOD READERS

GIRLS

AUDITORY IDENTIFICATION OF SUFFIXES

	Auditory Identification			How do they sound the same in some way?		
	/t/	/ŋ/	/s/	/t/	/ŋ/	/s/
K50	jumped marked	riding smoking	horses tumblers	(ed)	(ing)	(s) or an (es)
K56	jumped marked	train smoking	tumblers lion	(ed)	both have (n)	NR
K32	jumped marked	riding smoking	horses tumblers	(ed)	(ing)	(s)
K54	jumped marked	riding smoking	horses tumblers	(ed)	(ing)	(es)
K47	jumped marked	riding smoking	horses tumblers	/d/	(ing)	(s)
K51	jumped marked	riding smoking	horses tumblers	(ed)	(ing)	(es)
K52	jumped marked	riding smoking	horses tumblers	(ed)	(ing)	(s)
K36	jumped marked	riding smoking	horses tumblers	/t/	(ing)	(s)
K39	jumped splash	riding smoking	horses tumblers	(ps)	(ing)	(s)

.....continued

*NR means no response

*INC-R means incorrect response

GOOD READERS

AUDITORY IDENTIFICATION OF SUFFIXES

GIRLS .....continued

	Auditory Identification			How do they sound the same in some way?		
	/t/	/ŋ/	/s/	/t/	/ŋ/	/s/
K44	jumped marked	riding smoking	horses tumblers	(ed)	(ing)	(es)
K40	jumped splashed	riding smoking	horses tumblers	(ed)	(ing)	/Ers/
K8	jumped splashed	riding smoking	horses tumblers	(p)	(ing)	(s)
K10	jumped marked	riding smoking	horses tumblers	(ed)	(ing)	(es)
K63	NR	riding smoking	horses tumblers	I don't know	/n/	(s)

*NR means no response

*INC-R means incorrect response

GOOD READERS AUDITORY IDENTIFICATION OF SUFFIXES

BOYS

	Auditory Identification			How do they sound the same in some way?		
	/t/	/ŋ/	/s/	/t/	/ŋ/	/s/
K53	jumped marked	riding smoking	horses tumblers	(ed)	(ing)	(ers)
K49	jumped splashed	riding smoking	horses tumblers	(ed) /d/	(ing) /ŋ/	(s)
K31	jumped marked	riding smoking	horses tumblers	(ed)	(ing)	(ers)
K55	jumped marked	riding smoking	horses tumblers	(ed)	(ing)	(es)
K43	jumped splash	riding smoking	horses tumblers	don't have a long (e)	(ing)	(es) and (s)
K38	jumped marked	riding smoking	horses tumblers	(ed)	(ing)	(es)
K37	jumped marked	riding smoking	horses tumblers	(ed)	(ing)	(s)
K42	jumped marked	riding smoking	horses tumblers	(ed)	(ing)	(es)
K61	jumped splash	train riding	horses tumblers	I don't know	I don't know	(s) (es)
K62	marked jumped	smoking riding	horses tumblers	/t/	/ŋ/	/z/

.....continued

*NR means no response
* INC-R means incorrect response

GOOD READERS

AUDITORY IDENTIFICATION OF SUFFIXES

Boys.....continued

	Auditory Identification			How do they sound the same in some way?		
	/t/	/ŋ/	/s/	/t/	/ŋ/	/s/
K62	marked jumped	smoking riding	horses tumblers	/t/	/ŋ/	/z/
K46	jumped marked	riding smoking	horses tumblers	(ed)	(ing)	both start with same letters
K4	jumped marked	riding smoking	horses tumblers	(ed)	/ŋ/	(ers)
K5	jumped splashed	riding smoking	horses tumblers	(ed)	/ŋ/	(s)
K6	marked jumped	riding smoking	horses tumblers	(ed)	(ing)	(s)
K7	jumped marked	riding smoking	horses tumblers	(ed)	(ing)	/s/
K9	jumped marked	riding smoking	horses tumblers	(ed)	(ing)	(es)

*NR means no response

*INC-R means incorrect response

POOR READERS

GIRLS

VISUAL IDENTIFICATION OF SUFFIXES

	(ed)	(ing)	(s)
K59	jumped marked	riding smoking	horses tumblers
K29	jumped marked	train riding	horses lions
K57	jumped marked	riding smoking	horses tumblers
K25	jumped marked	riding smoking	horses tumblers
K28	jumped marked	train riding	horses tumblers
K22	jumped splash	riding smoking	horses tumblers
K03	jumped marked	riding smoking	horses tumblers
K02	jumped marked	riding smoking	horses tumblers
K11	jumped marked	riding smoking	horses tumblers
K15	jumped marked	riding smoking	horses lions
K17	jumped marked	riding smoking	horses tumblers
K30	splash marked	train riding	horses tumblers

POOR READERS — VISUAL IDENTIFICATION OF SUFFIXES

BOYS

	(ed)	(ing)	(s)
K58	jumped marked	riding smoking	horses tumblers
K60	jumped marked	riding smoking	horses tumblers
K24	jumped marked	riding smoking	horses tumblers
K27	jumped marked	riding smoking	horses tumblers
K19	jumped marked	riding smoking	horses tumblers
K23	jumped marked	riding smoking	horses tumblers
K20	jumped marked	riding smoking	{no response {shrugged-did not know
K21	jumped marked	riding smoking	horses tumblers
K26	jumped marked	riding smoking	horses tumblers
K34	jumped marked	riding smoking	horses tumblers
K33	jumped marked	riding smoking	horses tumblers
K35	jumped marked	riding smoking	horses tumblers
K01	jumped splash	train riding	horses tumblers
K12	jumped marked	riding smoking	horses tumblers
K13	jumped marked	riding smoking	horses tumblers
K14	jumped marked	riding smoking	horses tumblers
K18	jumped marked	riding smoking	horses
K16	splash marked	riding smoking	horses tumblers

GOOD READERS VISUAL IDENTIFICATION OF SUFFIXES

GIRLS

	(ed)		(ing)		(s)	
K50	jumped	marked	riding	smoking	horses	tumblers
K56	jumped	marked	riding	smoking	horses	tumblers
K32	jumped	marked	riding	smoking	horses	tumblers
K54	jumped	marked	riding	smoking	horses	tumblers
K47	jumped	marked	riding	smoking	horses	tumblers
K51	jumped	marked	riding	smoking	horses	tumblers
K52	jumped	marked	riding	smoking	horses	tumblers
K36	jumped	marked	riding	smoking	horses	tumblers
K39	jumped	marked	riding	smoking	horses	tumblers
K44	jumped	marked	riding	smoking	horses	tumblers
K40	splash	marked	train	riding	horses	tumblers
K8	jumped	marked	riding	smoking	horses	tumblers
K10	jumped	marked	riding	smoking	horses	tumblers
K63	jumped	marked	riding	smoking	horses	tumblers

GOOD READERS

BOYS

VISUAL IDENTIFICATION OF SUFFIXES

	(ed)	(ing)	(s)
K53	jumped marked	riding smoking	horses tumblers
K49	jumped marked	riding smoking	horses tumblers
K31	jumped marked	riding smoking	horses tumblers
K55	jumped marked	riding smoking	horses tumblers
K43	jumped marked	riding smoking	horses tumblers
K38	jumped marked	riding smoking	horses tumblers
K37	jumped marked	riding smoking	horses tumblers
K42	jumped marked	riding smoking	houses tumblers
K61	jumped marked	riding smoking	horses tumblers
K62	jumped marked	riding smoking	horses tumblers
K46	jumped marked	riding smoking	horses tumblers
K4	jumped marked	riding smoking	horses tumblers
K5	jumped marked	riding smoking	horses tumblers
K6	jumped marked	riding smoking	horses tumblers
K7	jumped marked	riding smoking	horses tumblers
K9	jumped marked	riding smoking	horses tumblers